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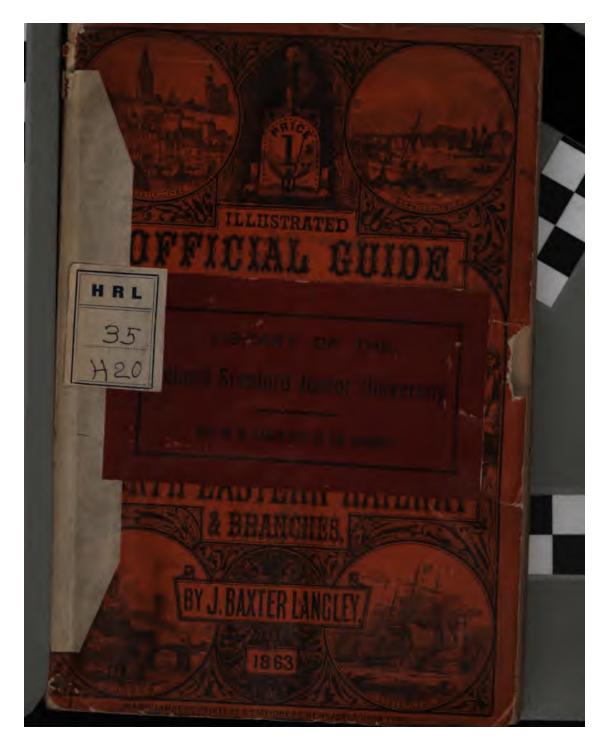
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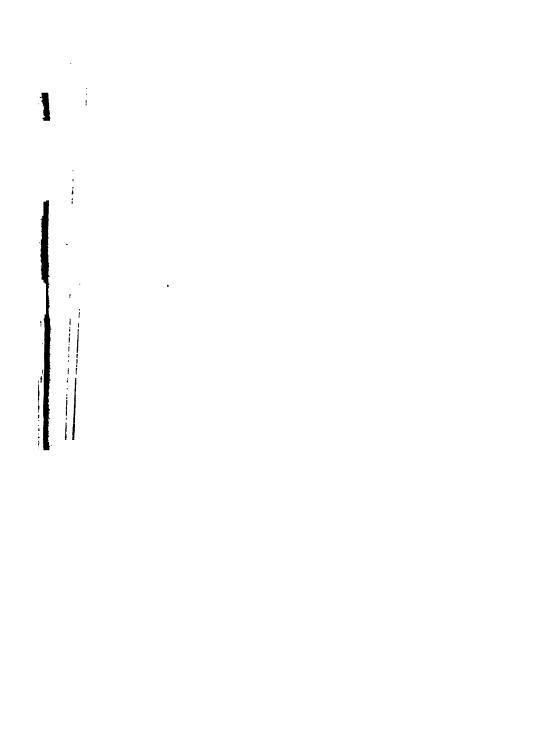
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THE ROCKET.

THE OFFICIAL GUIDE

TO THE

NORTH-EASTERN RAILWAY.

INTRODUCTORY.

The North-Eastern Railway may be said to run over the birth-place of the Railway System, and to be, in this point of view, the most interesting railway in the world. Railways were first brought into use in England, as early as the beginning of the seventeenth century, and were called into existence by the requirements of the Newcastle collieries. But in that early period, they were constructed wholly of timber, and had no claims to be considered useful roads for any other purpose than that for which they

The total outlay thus sanctioned in less than a quarter of a century was nearly three hundred and fifty millions of pounds sterling! Such an enormous sum, one would have supposed, would have quickly supplied all the requirements of the nation, nor can it be doubted that there was an oversupply provided by the speculative inclinations of the people towards railways; hence arose the celebrated panic which led to an opposite extreme, and depressed the value of railway stock as much as it had been previously exaggerated in value. Perhaps, however, the most astonishing fact connected with this expenditure is, that until September, 1830, there was no railway opened which afforded facilities for, or contemplated a revenue from the conveyance of passengers. In the prospectus of the Liverpool and Manchester line the chief inducement held out to lead shareholders to subscribe was the conveyance of raw cotton, manufactured goods, coals, and cattle, and the project seemed to hint with timidity at the possibility that half the passengers then riding by coach between Liverpool and Manchester might be induced to trust themselves to the line! Their first annual report astounded the commercial world and the shareholders, who had not from time to time witnessed what was going on. The great success of that splendid work was due to the passenger traffic, and that traffic has been ever since the chief inducement to embark in similar undertakings. Railways may be said indeed to have created this traffic, for no legitimate (as distinguished from speculative) line has yet been opened in which the travelling between the two extremities of the line has not been quadrupled in the first year.

The aggregate length of railway line in Great Britain up to 1849, was 5,996 miles; this year being taken as the end of the purely speculative period. In 1855 there were in the United Kingdom 7,813 miles, and during the the following five years, the total length of line actually open was as follows:

1856	 8,707	miles.
1857	 9,094	77

1858	 9,524	miles.
1859	 9,990	27
1860	 10.437	

In the meantime the railway system has extended into almost every portion of the world. Perhaps China is the only empire in which rail ways have been till now unknown. Indeed it is questionable whether in our Indian Empire we have not, to use a common expression "put the cart before the horse," by trying to establish railways there before there are ordinary roads, or canal navigation. China is much better prepared for rapid transit and commercial intercourse, and in that vast emporium of industry, railways will witness a stupendous development if our military powers can only be induced to let the old country have justice, quiet and free trade.

Railways have created towns and ruined them by diversions of traffic; they have raised the value of time, quickened the pulses of the age, and lengthened our life by increasing its possibilities; they have shortened space, fortified our coast by giving a sort of ubiquity to our forces, enlarged our commerce, given birth to the penny postage, rendered the electric telegraph possible, taught punctuality, and thus cultured business habits and equalized the value of labour. Without them our cotton manufacture could not have grown to such splendid proportions and our industrial population have been forced by the railway system to see the value of education. In railways science finds a practical vindication, and the philosopher can point with triumph to the express train as the realization of a dream.

The railway itself, as a mere road, would, however, have been of little use for passenger traffic if it had not been for the invention of the locomotive engine. Towards the end of the eighteenth century, suggestions had been made by various persons for the application of steam to the propulsion of waggons. Cynot, a French engineer, in 1763, constructed a locomotive which was found to be too ponderous for use. The model is still to be seen in one of the Paris museums. "The first English model of a

steam carriage," Mr. Smiles* tells us, "was made by William Murdoch. the friend and assistant of Watt. It was on the high pressure principle, and ran upon three wheels." Richard Trevethick, a pupil of Murdoch. in 1802, took out a patent to secure his right to the invention of a steam carriage, adapted for use upon common roads. This engine resembled a stage coach on four wheels; and was the first successful high pressure engine constructed on the principle of moving a piston by the elasticity of steam against the pressure only of the atmosphere. This locomotive was exhibited in London; but the inventor seems to have abandoned it in ill-temper. In the following year, 1804, he constructed his second or railway locomotive, which, however, turned out a practical failure, though, for what exact reasons, does not appear. The inventor seems to have been discouraged by imaginary objections, and to have been tempted to give his attention to schemes which appeared more lucrative. In 1811, Mr. Blenkinsop, of Leeds, took out a patent for a locomotive engine, which worked successfully from Middleton to Leeds; but still the problem of a railway locomotive was not considered to be solved. In 1812, Messrs. Chapman, of Newcastle, endeavoured to overcome the imaginary difficulty of want of cohesion between the driving wheels and rails; but the engine was clumsy, and was difficult to keep in repair. Next among the abortions of railway ingenuity came Mr. Brunton's "Mechanical Traveller", with legs like those of a horse. This steam horse turned out to be "broken winded and vicious," for it blew up and killed some of the bystanders. All these inventions were at various times mistaken by simple-minded and ignorant persons for that mythical personage, who is supposed "to go about like a roaring lion, seeking whom he may devour," but never succeeding in devouring anybody. While these inventions were proceeding, the best of them seem to have been tried upon an imperfect railway, by Mr. Blackett, a colliery owner at Wylam, a few miles from Newcastle.

At this place was born George Stephenson, and within a few miles the

^{*} Life of George Stephenson, 1859.

yet undeveloped great man was brooding over the same subject at Killingworth—hereafter to be referred to under the head of that station, on the North Eastern Railway. The illustrious "Geordie" was enginewright of the collieries there, and the history of the gradual steps by which he achieved his great celebrity, are written in many forms. railway traveller, the small and neatly got up volume, published by Murray of London, and entitled "The Story of the Life of George Stephenson, by Samuel Smiles," is the handiest and most available. George Stephenson's practical knowledge got rid of the imaginary difficulty about the want of adhesion between the rails and the driving wheel, but in other respects. his engine very much resembled that of Blenkinsop. A water barrel formed the tender. On the 25th of July, 1814, it was placed upon the Killingworth Railway, and upon being tried, was found to be capable of drawing after it, eight loaded carriages at the rate of about four miles an hour, up a slight incline. Experience subsequently suggested the introduction of the waste steam as a blast into the chimney to increase the draught from the fire, and this gave the first element of prospective success to the locomotive engine, by rendering possible the adoption of the tubular boiler. Armed with this practical knowledge, he constructed a second engine, and took out a patent for it on the 28th February, 1815. This engine contained the germ of all that has since been effected, and was the model of that marvellous instrument which now conveys trains at the rate of seventy miles an hour. The history of the projected Stockton and Darlington Railway-often called "The Quaker's Line"-contains the story of George Stephenson's next step and first experiment of the railway coach for passengers. Associated with this, is the honoured name of Mr. Edward Pease, who lived to witness the great fruits of his wise support to a clever working man. Mr. Pease died at Darlington, on the 31st of July, 1858, at the age of 92, retaining to the last his generous urbanity. This railway, one of the most successful in pecuniary results of any in the world, has been amalgamated with the North Eastern Railway, and thus

the traveller will see that, in passing through the country over which; this last mentioned line extends, he rides through the district which not only was the birth place of the railway, but of its necessary adjunct, the locomotive. It was in the Amended Stockton and Darlington Act, that we find "the first clause in any railway act, empowering the employment of locomotive engines for the working of passenger traffic." Nevertherless, when the engines were ordered for the Stockton and Darlington line the Directors had no idea that they could be made available for passenger traffic.

"The Stockton and Darlington line," writes Mr. Smiles, "was opened. for traffic on the 27th of September, 1825. An immense concourse of people assembled from all parts to witness the ceremony of opening this first public! The powerful opposition which the project had encountered, the threats which were still uttered against the railway by the road trustees and: others, who declared that they would yet prevent its being worked, and perhaps the general unbelief as to its success which still prevailed, tended greatly to excite the curiosity of the public as to the result. Some went to rejoice at the opening, some to see the 'bubble burst;' and there were many prophets of evil who would not miss the blowing up of the boasted Travelling Engine. The opening was, however, auspicious. The proceedings commenced at Brusselton Incline, about nine miles above Darlington. when the fixed engine drew a train of loaded waggons up the incline from the west, and lowered them on the east side. At the foot of the incline, a locomotive was in readiness to receive them, Mr. Stephenson himself driving the engine. The train consisted of six waggons loaded with coals and flour; after these was the passenger coach, filled with the directors and their friends, and then twenty-one waggons fitted up with temporary seats for passengers; and lastly came six waggon-loads of coals, making in all a train of thirty-eight vehicles. The local chronicler of the day went almost out of breath in describing the extraordinary event:—'The signal

^{*} Smiles' Story of the Life of George Stephenson, p. 128 (note).

being given,' he says, 'the engine started off with this immense train of carriages; and such was its velocity, that in some parts the speed was frequently 12 miles an hour; and at that time the number of passengers was counted to be 450, which, together with the coals, merchandize, and carriages, would amount to near 90 tons. The engine, with its load, arrived at Darlington, a distance of 8½ miles, in 65 minutes. The six waggons loaded with coals, intended for Darlington, were then left behind; and, obtaining a fresh supply of water and arranging the procession to accommodate a band of music, and numerous passengers from Darlington, the engine set off again, and arrived at Stockton in three hours and seven minutes, including stoppages, the distance being nearly 12 miles.' By the time the train reached Stockton, there were about 600 persons in the train or hanging on to the waggons, which must have gone at a safe and steady pace of from four to six miles an hour from Darlington. 'The arrival at Stockton,' it is added, 'excited a deep interest and admiration.'"

The engine which created this sensation is still preserved at Darlington, and should be visited en passant.

The next great step in railway progress was identified with the Liverpool and Manchester Railway, and there the battle of the locomotive was fought out. The railway had been made over Chat Moss, the tunnel had been constructed, but the directors had not decided whether it was possible to work a large traffic—passengers being out of the question—by locomotive engines. At length, influenced by George Stephenson's earnestness and arguments, the directors offered a prize of £500 for the best locomotive engine, which on a certain day should be produced on a railway, and perform the specified conditions in a satisfactory manner. The fate of railways in a great measure depended upon the issue of this appeal to the mechanical genius of England. Robert Stephenson was sent for home to assist his father, and the "Rocket" engine was built at the works in Newcastle-on-Tyne after enormous difficulties. The competition is thus described by Mr. Smiles in his charming volume:—

On the day appointed for the great competition of locomotives at Rainhill, the following engines were entered for the prizes:—

- 1. Messrs. Braithwaite and Ericsson's "Novelty."
- 2. Mr. Timothy Hackworth's "Sanspareil."
- 3. Messrs. R. Stephenson and Co.'s "Rocket."
- 4. Messrs. Burstall's "Perseverance."

Another engine was entered by Mr. Brandeth of Liverpool—the "Cycloped," weighing three tons, worked by a horse in a frame; but it could not be admitted to the competition. The above were the only four exhibited, out of a considerable number of engines constructed in different parts of the country in anticipation of this contest, but which could not be satisfactorily completed by the day of trial.

The ground on which the engines were to be tried was a level piece of railroad, about two miles in length. Each was required to make twenty

trips, or equal to a journey of seventy miles, in the course of the day; and the average rate of travelling was to be not under ten miles an hour. It was determined that, to avoid confusion, each engine should be tried separately, and on different days.

The day fixed for the competition was the 1st of October, but to allow sufficient time to get the locomotives into good working order, the director extended it to the 6th. On the morning of the 6th, the ground at Rainhill presented a lively appearance, and there was as much excitement as if the St. Leger were about to be run. Many thousand spectators looked on amongst whom were some of the first engineers of the day. A stand was provided for the ladies; and the "beauty and fashion" of the neighbourhood were present, whilst the side of the road was lined with carriages of all descriptions.

It was quite characteristic of Mr. Stephenson, that, although his engine did not stand first on the list for trial, it was the first that was ready; and it was accordingly ordered out by the judges for an experimental trip. The distance that it ran on that day was about twelve miles, performed in about fifty-three minutes.

The "Novelty" was next called out. It was a light engine, very compact in appearance, carrying the water and fuel upon the same wheels as the engine. The weight of the whole was only three tons and one hundred-weight. A peculiarity of this engine was that the air was driven or forced through the fire by means of bellows. The day being now far advanced, and some dispute having arisen as to the method of assigning the proper load for the "Novelty," no particular experiment was made, further than that the engine traversed the line by the way of exhibition, occasionally moving at the rate of twenty-four miles an hour.

The "Sanspareil," constructed by Mr. Timothy Hackworth, was next exhibited; but no particular experiment was made with it on this day. This engine differed but little in its construction from the locomotive last applied by Mr. Stephenson to the Stockton and Darlington Railway, of

which Mr. Hackworth was the locomotive foreman. It had the double tube containing the fire, passing along the inside of the boiler, and returning back to the same end at which it entered. It had also the steam blast in the chimney; but as the contraction of the orifice by which the steam was thrown into the chimney for the purpose of intensifying the draught, was a favourite idea of Mr. Hackworth, he had sharpened the blast of his engine in a remarkable degree. This was the only novel feature in the "Sanspareil."

The contest was postponed until the following day; but before the judges arrived on the ground, the bellows for creating the blast in the "Novelty" gave way, and it was found incapable of going through its performance. A defect was also detected in the boiler of the "Sanspareil;" and Mr. Hackworth was allowed some further time to get it repaired. The large number of spectators who had assembled to witness the contest were greatly disappointed at this postponement; but, to lessen it, Mr. Stephenson again brought out the "Rocket," and, attaching it to a coach containing thirty persons, he ran them along the line at the rate of from twentyfour to thirty miles an hour, much to their gratification and amazement. Before separating, the judges ordered the engine to be in readiness by eight o'clock on the following morning, to go through its definite trial according to the prescribed conditions.

On the morning of the 8th of October, the "Rocket" was again ready for the contest. The engine was taken to the extremity of the stage, the fire-box was filled with coke, the fire lighted, and the steam raised until it lifted the safety valve, loaded to a pressure of fifty pounds to the square inch. This proceeding occupied fifty-seven minutes. The engine then started on its journey, dragging after it about thirteen tons weight in waggons, and made the first ten trips backwards and forwards along the two miles of road, running the thirty-five miles, including stoppages, in an hour and forty-eight minutes. The second ten trips were in like manner performed in two hours and three minutes. The maximum velocity at-

tamed during the trial trip was twenty-nine miles an hour, or about three times the speed that one of the judges of the competition had declared to be the limit of possibility. The average speed at which the whole of the journeys were performed was fifteen miles an hour, or five miles beyond the rate specified in the conditions published by the Company. The entire performance excited the greatest astonishment amongst the assembled spectators; the directors felt confident that their enterprise was now on the eve of success; and George Stephenson rejoiced to think that in spite of all false prophets and fickle counsellors, his locomotive system was now safe. When the "Rocket," having performed all the conditions of the contest, arrived at the "grand stand" at the close of its day's successful run, Mr. Cropper—one of the directors favourable to the fixed-engine system—lifted up his hands, and exclaimed "Now has George Stephenson at last delivered himself!"

Neither the "Novelty" nor the "Sanspareil" was ready for trial until the 10th, on the morning of which day an advertisement appeared, stating that the former engine was to be tried on that day, when it would perform more work than any engine upon the ground. The weight of the carriages attached to it was only about seven tons. The engine passed the first post in good style; but in returning, the pipe from the forcing-pump burst and put an end to the trial. The pipe was afterwards repaired, and the engine made several trips by itself, in which it was said to have gone at the rate of from twenty-four to twenty-eight miles an hour.

The "Sanspariel" was not ready until the 13th; and when its boiler and tender were filled with water, it was found to weigh four hundredweight beyond the weight specified in the published conditions as the limit of four wheeled engines; nevertheless the judges allowed it to run on the same footing as the other engines, to enable them to ascertain whether its merits entitled it to favourable consideration. It travelled at the average speed of about fourteen miles an hour, with its load attached; but at the eighth

e cold-water pump got wrong, and the engine could proceed no

It was determined to award the premium to the successful engine on the following day, the 14th, on which occasion there was an unusual assemblage of spectators. The owners of the "Novelty" pleaded for another trial; and it was conceded. But again it broke down. Then Mr. Hackworth requested the opportunity for making another trial of his "Sanspariel." But the judges had now had enough failures; and they declined on the ground that not only was the engine above the stipulated weight, but that it was constructed on a plan which they could not recommend for adoption by the directors of the Company. One of the principal practical objections to this locomotive was the enormous quantity of coke consumed or wasted by it—about 692 lbs. per hour when travelling—caused by the sharpness of the steam blast in the chimney, which blew a large proportion of burning coke into the air.

The "Perseverance" of Mr. Burstall was found unable to move at more than five or six miles an hour; and it was withdrawn at an early period from the contest. The "Rocket" was thus the only engine that had performed, and more than performed all the stipulated conditions; and it was declared to be fully entitled to the prize of £500, which was awarded to the Messrs. Stephenson and Booth accordingly. And further to show that the engine had been working within its powers, Mr. Stephenson ordered it to be brought into the ground and detached from all encumbrances, when, in making two trips, it was found to travel at the astonishing rate of thirtyfive miles an hour. The "Rocket" had thus eclipsed the performance of all locomotive engines that had yet been constructed, and outstripped even the sanguine anticipations of its constructors. Above all, it effectually answered the report of Messrs. Walker and Rastrick, and established the superiority of the locomotive for the working of the Liverpool and Manchester Railway, and indeed all future railways. The success of the experiment, as judged by the public, may be inferred from the fact that the shares of the Company immediately rose ten per cent., and nothing further was heard of the proposed twenty-one fixed engines, engine-houses, ropes, &c. All this cumbersome apparatus had at once been effectually disposed of.

Very different now was the tone of those directors who had distinguished themselves by the persistency of their opposition to Mr. Stephenson's plans. Coolness gave way to eulogy, and hostility to unbounded offers of friendship; after the manner of many men who run to the help of the strongest. Deeply though he had felt aggrieved by the conduct pursued towards him during this eventful struggle, by some from whom forbearance was to have been expected, Mr. Stephenson never entertained towards them in after life any angry feelings; on the contrary, he forgave all. But though the directors afterwards passed unanimous resolutions eulogising "the great skill and unwearied energy" of their engineer, he himself, when speaking confidentially to those with whom he was most intimate, could not help distinguishing between his "foul-weather and fair-weather friends."

From the day of the triumph of the "Rocket," railway improvement has gone steadily forwards, and the system has penetrated into almost every part of the world.

Let us now, for a moment, contrast the railways as we now see them with the itinerary condition which preceded them.

"Until the close of last century, the internal transport of goods was chiefly performed by wagon, and was not only extremely slow, but so expensive as to exclude every object except manufactured articles. The charge for carriage, by wagon, from London to Leeds, was at the rate of £13 per ton, being 1s. 1½d. per ton per mile; between Liverpool and Manchester it was 40s. per ton, or 1s. 3d. per ton per mile. Heavy articles, such as coals, &c., could only be available for commerce, where their position favoured transport by sea, and, consequently, many of the richest districts of the kingdom remained unproductive, owing to the tardy advancement of the art of transport. Coals are now carried upon railways at a penny per ton, per mile, and in some places, at even a lower rate. Merchandize which in 1763 cost 1s. 2d. and 1s. 3d. per mile for carriage, is now conveyed at 3d., whilst others, heavier in proportion to their bulk, are transported at 2½d. per ton per mile. The wagon transport was also

4

dimited in its speed, never exceeding, even in its most improved state, 24 miles a day, while the present transport of goods by railway is effected at the rate of upwards of 30 miles per hour.

"Before the establishment of railways on their present scale, the average fare of mail and stage coaches, including the allowance to guards and coachmen, were as follows:—

 Mail (inside)
 52s. per 100 miles.

 ,, (outside)
 30s. ,, ,

 Fast coach (inside)
 48s. ,, ,

 ,, (outside)
 26s. ,, ,

 The average railway fare for the same distance, at the present time, being—

" 3rd class 8s

Additional expenses were also incurred by passengers during long journeys, by the board and lodging which they were obliged to obtain; and which, to a very great extent, have now become obsolete by reason of more rapid travelling. Postal arrangements, prior to the 17th century, may be said to have had no existence. They were first instituted in England by Edward IV., during the Scottish war. He is said to have established, at certain posts, 20 miles apart, a change of riders, who handed letters to one another, and by this means expedited them in two days. In the year 1581 the chief postmaster of England was Mr. Thomas Randolph. The present post-office institution was founded by Charles II., 1660, when a running post or two was ordered to run night and day, between Edinburgh and London, to go there and back in six days. So late as 1834, the average speed of mail coaches in Great Britain was only about nine miles an hour. At the present time, the mails carried by railway, travel at the rate of 50 or 60 miles an hour. From the year 1614, when canals began to be formed, much goods traffic was conveyed by them. The first canal that was made in England, was by Henry I., in the year 1135, when the river Trent was joined to the Witham.

1624 the Thames was made navigable to Oxford; and in 1715, the Kennet to Reading. The origin of canal navigation proper, however, dates from 1755, when an Act of Parliament was passed for constructing a canal about 11 miles long, extending from the mouth of Sankey Brook, on the Mersey, to Gerrard's Bridge and St. Helen's. Before this was completed, the Duke of Bridgewater commenced his canal between Worsley and Manchester, in the construction of which Brindley displayed his celebrated engineering talents, which led to his subsequent employment in making several of the canals which served as the principal means of inland navigation. During the remainder of the eighteenth and the early part of the nineteenth century, the construction of canals was carried on with great vigour, until they reached in England alone to an aggregate length of more than 2,200 miles. From the year 1755 to 1831, sixty-two different canals were cut; their formation did much to encourage traffice and were the chief means of coal navigation for many years. Since 1831, however, when railways began to be formed, no canals have been cut. owing to the superior and quicker mode of transit by rail."*

The mail was first sent by railway on the 11th of November, 1830. The development of the postal system is elaborately described in an article in St. James' Magazine for June, 1861. We merely notice it here as one of the public facilities which could not have been obtained if railways had not stimulated passenger traffic to the extent they have done. Neverthehas, no railway has been started to which there has not been opposition of some kind, resultant in enormous legal expenses.

The conchinen, guards, and other persons who gained their living upon the old roads were, to a large extent, absorbed into the new mode of travelling. According to a Parliamentary return, even as early as 1849, the railways then completed had created employment for 55,968, whilst at the present time it is estimated that there are nearly 100,000 depending upon the railway system for their livelihood. Upon railways in construc-

[.] Lever's " Railroad and Mine "

tion in 1849, there were 103,816 persons engaged, and there are believed to be upwards of 57,000 employed in like manner at the present time. Many of the labourers on our early railways have, since the "Railway Mania," made fortunes as diggers at the Australian mines.

In 1859, there were 149,757,292 passengers conveyed by the railways of Great Britain, and the miles travelled amounted to 2,028,907,632, the total receipts from which were £11,105,731, 17s. 10d. The weight of general merchandise carried was 27,005,937 tons, which gave a revenue of £8,373,343, 11s. 7d. The mineral traffic consisted of 51,756,782 tons; and the number of cattle amounted to 12,767,017. The grand total of receipts was no less a sum than £25,743,502, 10s. 11d. During that year the trains had run over a distance equal to 93,515,796 miles—a planetary distance. In 1858, by Parliamentary and other returns, we learn that the capital which had been expended upon the railways of Great Britain by shares and loans was £325,375,507.

The Railway Clearance House is a feature of considerable interest in connection with the railway system, the principal objects being the settlement of the accounts of the receipts from through traffic in which two or more companies are interested; and those arising out of the use by a company of other companies' carrying stock, the audit of traffic accounts, &c.

There are three different guages of line in Great Britain, the narrow guage, or original "Stephenson measurement," viz., 4ft. 8½in.; the broad guage, or Brunel measurement, viz., 7ft., and the Irish or intermediate guage, 5ft. 3in. There are parts of the railway system in which both broad and narrow guage is laid down for the convenience of the companies running over them. In 1843 there were seven widths of guage; but it was found so inconvenient that the adoption of either the broad or narrow guage in England was forced upon the various companies. From Mr. Levers' work we quote the following curious facts on "Speed, power, and gradient." He states that "a rise in 8½ feet in one mile adds half to

the resistance, 17 feet rise in one mile doubles the resistance; and 34 feet rise in a mile trebles it. One horse can draw 3½ tons on a railway, at the rate of six miles an hour, or ten tons at two miles an hour. An engine and tender can go 80 miles in an hour. The rails wear the 1½0 part of an inch deep yearly. Railway traction is 7½0s. per ton, friction is allowed for at from ½ to ½. A locomotive engine can draw a train and 700 persons 22 miles in one hour, with a rise of three inches in 100; but at a rise of one foot in 12 it cannot move forward. It generally has eleven times its own weight to draw, and consists of 5,416 separate pieces. The ordinary rate of speed is, per second, of a man walking, four feet; a good horse in harness, 12 feet; a rein-deer in a sledge on the ice, 26 feet; an English race horse, 43 feet; a hare, 88; the wind, 82; sound, 1090; a 24 lb. cannon ball, 1300. A railway engine travelling at the ordinary rate of 30 miles an hour, performs 44 feet per second."

Having thus briefly noticed the history and statistics of railways in general, we shall now turn to that line to which this volume professes to be a guide.



THE NORTH-EASTERN RAILWAY.

This line embraces the York, Newcastle and Berwick; the York and North Midland; Leeds Northern; and Malton and Driffield lines, which were amalgamated in 1854 by sanction of Parliament.

The Company has also, by amalgamation or purchase, become possessed of the Hartlepool Dock and Railway, Dearness Valley, North Yorkshire and Cleveland, Hull and Holderness, Newcastle and Carlisle, and Bedale and Leyburn Railways.

The amalgamation of the North-Eastern and the Newcastle and Carlisle Railway Companies was sanctioned by Parliament in the session of 1862; after two severe parliamentary campaigns, in which the North-Eastern Company was stoutly opposed by other railway companies, and by one or two local public bodies. The re-introduction of the measure in 1862 led to negotiations with the London and North-Western, North-British, and Caledonian Companies, which resulted in arrangements whereby the objections of these companies to the amalgamation were removed, extended facilities were agreed upon for the mutual interchange of traffic, and the right to use the Citadel Station at Carlisle was secured to the North-

Eastern Company. By the terms of amalgamation, the shareholders in the Carlisle Company now form a section of proprietors in the North-Eastern Company; and two of their directors have become members of the North-Eastern Board.

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The Directors have also entered into a working arrangement with the Stockton and Darlington Railway Company for a union of the two undertakings. The leading features of the arrangement are similar to those adopted in the North-Eastern amalgamation, in accordance with which the joint nett receipts of the united company are to be divided in proportion to the separate receipts of each company in the year 1859, the Stockton and Darlington section receiving 151 per cent. The South Durham and Lancashire and Eden Valley having been promoted by the Stockton and Darlington, and intimate arrangements and agreements entered into between them, it has been considered desirable that those companies should be embraced in the arrangement, and terms have been agreed upon for this purpose. The question of dock accommodation at Hull having been recently brought before the directors by the leading merchants, shipowners, and other influential parties in Hull, they have agreed to support the new dock company, and to subscribe £50,000 towards its capital, subject to certain stipulations, and to the company being represented at the new dock company's board.

The company have the power, from time to time, to reduce the number of directors to not less than twelve, and again, to increase the same, provided that the total number do not exceed fifteen, and in the event of any such reduction or increase, the quorum of such directors shall be thereupon fixed by the company. The qualification to sit as a director is £1,000 stock. The accounts are closed on the 30th of June, and 31st December; the statutory meetings held are between the 15th of January, and the 31st of March, and between the 15th of July, and the 30th of September. Certificates of all shares paid up in full, or stock coupons, are required to be sent in when stock is transferred, but certificates of shares not fully paid

r are not required. Transfer fee for stock or shares, 2s. 6d. each deed; r debentures, 2s. 6d. each deed. The debentures should accompany the ed, that a certificate may be endorsed on them. Transfer fees may be id by postage stamps. Transfer books closed 14 days, and proxies lged 48 hours before each meeting.

The following gentlemen were the

BOARD OF DIRECTORS FOR 1862.

H. S. Thompson, Esq., M.P., Chairman, Kirby Hall, York.

GEORGE LEEMAN, Esq., Deputy Chairman, York.

NEWMAN CASH, Esq., Leeds.

W. C. COPPERTHWAITE, Esq., Malton.

GEORGE DODSWORTH, Esq., Clifton, York.

JOHN FOGG ELLIOT, Esq., Elvet Hill, Durham.

JAMES HARTLEY, Esq., High Barnes, Sunderland.

James Hodgson, Esq., Newcastle-upon-Tyne.

W. R. Hunter, Esq., Newcastle-upon-Tyne.

James Kitson, Esq., Leeds.

C. G. MACLEA, Esq., Leeds.

JAMES PULLEINE, Esq., Crakehall, Bedale.

SAMUEL PRIESTMAN, Esq., East Mount, Hull.

G. H. SEYMOUR, Esq., York.

W. L. WHARTON, Esq., Dryburn, Durham.

R. WILLIAMSON, Esq., Scarborough.

HENRY PEASE, Esq., M.P., Darlington.

OFFICERS.

General Manager.—Wm. O'BRIEN, York.

Secretary. - John Cleghorn, York.

Engineer-in-Chief .- Thos. E. HARRISON, Newcastle-upon-Tyne.

Engineers (Southern Division).—T. Cabry, York; (Northern Division), John Bourne, Newcastle-upon-Tyne.

Accountant.—HENRY TENNANT, Newcastle-upon-Tyne.

Goods Managers (Northern Division).—A. Allan, Newcastleon-Tyne; (Southern Division) James Wilson, York.

General Passenger Superintendent .- ALEX. CHRISTISON, York.

Local Passenger Superintendent (Northern District).—WILLIAM EGLINTON, Newcastle-on-Tyne.

Mineral Traffic Managers, (Southern Division).—R. W. BAILEY, York; (Northern Division), J. G. QUELCH, Newcastle-on-Tyne.

Solicitors.—Richardson, Gutch, and Richardson, York.

Auditors.—A. H. WYLIE, Liverpool, and J. R. BYWATER, Leeds.

Head Offices-York. Accountant's Offices-Newcastle-on-Tyne.

GENERAL DESCRIPTION OF THE LINE.

From the foregoing details it will be seen that the North-Eastern Railway system extends from Normanton and Knottingley in the south, to Berwick on-Tweed in the north; its most easterly points are Withernsea, Bridling ton, Scarborough, and Whitby; its western extremity is Carlisle; and i acts as a feeder also to the ports of Hull, Middlesbro', Stockton, Hartlepool Sunderland, and North and South Shields. It is the main artery of commerce in the counties of Yorkshire, Durham and Northumberland; by its connection with the Lancashire and Yorkshire at Normanton it connect Manchester and Liverpool with the north-eastern ports; by its connection with the Midland, it brings these latter ports into communication with Birmingham and the Midland Counties; and by its connection with the Great Northern at Knottingley it forms a part of the main trunk of the direct route from London to Edinburgh, and the east of Scotland. I

- is, moreover, connected with the North British at Hexham, Carlisle, Berwick and Kelso; with the Glasgow and South Western, the Maryport and Carlisle, and the London and North Western at Carlisle; with South Durham and Lancashire at Barnardcastle and Bishop Auckland, and with the West Hartlepool at Ferry Hill. As in a prospect or a picture, the general outline is that which is first studied, so in describing a railway we shall render ourselves most intelligible by giving in the outset, a distinct exposition of the plan we propose to adopt in describing the line and the spots of interest associated therewith. To render this as practically useful as possible, we shall follow the divisions formed by the natural traffic, commencing in the south, and ascending towards the north, making the necessary deviations to the right and to the left, as we proceed on our journey. Upon this plan the following will be the order in which we shall describe the various sections of the line:—
 - From Normanton to York (connecting the London and North-Western and Lancashire, and Yorkshire and Midland lines with the main line at York.)
 - 2. From Knottingley to Milford Junction (connecting the Great Northern with the main line.)
 - 3. MILFORD to YORK.
 - 4. From LEEDS to THIRSK.
 - 5. MILFORD to HULL.
 - 6. Branch from Selby to Market Weighton.
 - 7. From Market Weighton to York.
 - 8. From HULL to SCARBOROUGH.
 - 9. From York to Scarborough.
 - 10. Branch between the Scarborough line and WHITBY.
 - 11. The HARROGATE BRANCH (by WETHERBY.)
 - 12. East and West Yorkshire Branch (Harrogate, KNARESBRO, and YORK.
 - 13. MELMERBY and Northallerton.

- 14. LEYBURN and NORTHALLERTON.
- 15. RICHMOND Branch.
- 16. Northallerton to Stockton-on-Tees.
- 17. STOKESLEY and WHITBY Branch.
- 18. FERRY HILL and HARTLEPOOL.
- 19. LEAMSIDE to DURHAM.
- 20. DURHAM to BISHOP AUCKLAND.
- 21. Lines between Hartlepool, Durham, and Sunderland, (Pensl Junction, &c.)
- 22. MEDOMSLEY and WASHINGTON.
- 23. NEWCASTLE, SUNDERLAND, and South SHIELDS.
- 24. TYNEMOUTH and North Shields.
- 25. BERWICK and KELSO.
- 26. Newcastle and Carlisle.*
- * A description of the Newcastle and Carlisle line will constitute a separa volume.

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NORTH EASTERN RAILWAY.

SECTION I .- FROM NORMANTON TO YORK.

The Southern commencement of the North Eastern Railway is at Nor-MANTON, a first-class station, occupied jointly by the North Eastern, Midland, and Lancashire and Yorkshire Companies. It may be said to be a place dependent entirely upon railway traffic, and, as a town, it has no existence. The population of the whole township, by the census of 1851, was under 500, and appears rather to have undergone a decrease. in consequence of persons having found their settlement unprofitable. The magnificent hotel which was built close to the station with its pleasure gardens and extensive wine cellars, was for many years untenanted, but has been at the time we write, bought by the Midland Railway Company for official purposes. The town or railway settlement, is in the West Riding of Yorkshire, through which the North Eastern Railway runs north-east, towards Milford Junction, and so to York. Whilst the traveller is awaiting the arrival of other trains which bring the passenger traffic from the south-east to this centre, it may not be out of place to note a few of the more interesting general facts about the large and very important county into which he has now entered.

YORKSHIRE is the largest of English counties, bounded on the N.E. and E. by the sea; and on the south by the estuary of the Humber (on which is situated the flourishing port of Hull, with docks connected with the North Eastern Railway). It has also on the south the counties of Lincoln, Nottingham, and Derby, and at the south-west touches Cheshire. Lancashire forms its western boundary, and Northumberland its limit to

the north-west, Durham and the Tees lie on the north. The county is divided into three Ridings—the North Riding, the West Riding, and the East Riding; the West Riding being further divided into two parliamentary divisions instead of one.

In parliamentary matters, population returns, &c., these are treated as distinct counties. By the census returns of 1861, the population and houses had increased as follows:—

	Inhabited Houses.		
	1851.	1861.	
North Riding	44,446	50,506	
West Riding	264,302	316,061	
East Riding	44,365	49,385	
City of York	7 ,077	8,243	
	Population.		
	1851.	1861.	
North Riding	215,214	244,804	
West Riding	.1,325,495	1,507,511	
East Riding	. 220,983	240,359	
City of York	36,303	40,377	

The coast of the county is for the most part high and picturesque; the cliffs abound in fossils. It runs from the mouth of the Tees southeasterly to Whitby, which has been made an important harbour with considerable trade of late years. A little to the south is the dangerous indentation of the shore, known as Robin Hood's Bay. To the south-east is Scarborough Bay, a place which must be described more in detail hereafter, but which is endowed with great natural beauty; to the east the coast line curves to Filey Point, which is near the boundary line between the North and East Ridings.

South of Filey Point is Filey Bay, from which the coast runs in a nearly straight line by Specton Cliffs to Flamborough Head, which forms the extremity of a range of chalk cliffs of brilliant whiteness, six miles long,

and rising to an elevation of 300 feet. Here, at the base of the rocks are caverns to explore; and near the extremity of the promontory, on a site about 250 feet above the sea, is a lighthouse erected by the Trinity House Corporation in 1806, and which has been of very great service in the navigation of this dangerous part of the coast. Further to the south is Bridlington Bay, on the coast of which the sea has made such encroachments as gradually to sweep away three villages which were situated upon Beyond is the sharp promontory which terminates in the the shore. Spurn Head, the northern boundary of the estuary of the Humber. Here the capricious ocean formerly encroached considerably, but is now retiring, leaving extensive tracts of marsh land. One of these was formerly an island, but is now joined to the main land—under the name of Spurn-Sailing up the estuary of the Humber, the traveller would see on his left or to the south, the port of Great Grimsby, which may be said to have risen into importance during the last thirty years; its docks are in connection with the Manchester, Sheffield, and Lincolnshire Railway. which supplies it with commercial life from the land side, and distribute the products received from seaward. Further on, on the right, is Hull with its docks—which will be fully described in treating of the line between Leeds and Withernsea. Beyond, the mouth of the Trent is seen on the left, and the river narrows, as Goole is reached. The river Humber forms the southern boundary of the county. Along the boundary of Derbyshire and the small part of Cheshire which separates that county from Lancashire, the line of demarcation is across the elevated mountainous district, called "The Peak of Derbyshire." The river Lune forms the boundary on the Westmoreland side. The Tees, associated with many "romantic stories of flood and field," forms the northern boundary of the county.

The most remarkable feature in the general conformation of the county of Yorkshire, is the great valley drained by the river Ouse, and its tributaries. This declivity forms the northern slope of the most extensive valley in England. The bold coast line before described forms the eastern

I THE THE IN THE LAST HELD THE TAKE C CHEM •• THE RESERVE AND PROPERTY IN in an in antimating تفديرة والمراز أأحيرا the remaining region of make make that the more than the Sugar Bearing Some Call Se ساده فراسته المعول والسا AND THE PERMIT الكالمان والمنافق والمناف والمناف والمناف والمناف والمانات ر چيدو او د Mariana which he armed as spent a sell-title lift is hessenten. and the property and constitution of the first termination of a recognition er e dant gewone i de de la la vien de la Frederica Flagmingte, mil e Tripped by a prof. but of and it theoretical in the int. at the I The surprise will be the true of the first of the true that

The Nation of the Descript terrebus near the nones of mappersonate of marrowing we fill ut the valley of the and proportion in Institut Marketta hour the Totalite While from the communition of the north lattice of the east side of this vi The assent of the World of the eastern side is the rate volume thay measure can however payons 60 feet. Their so againming present the breat prospects. The peritienles district of H was a particularly workly of attention from those in search of th turning me Herring More is a rare stone which will repay a visit On the western ride of the great valley of the Ouse lie the w Morrhada of Yorkshire, the general elevation of which is greater think the third amount of These are the Pennine chain extending sout to the Derbyshire and Staffordshire Hills, and form the great modistrict of Phyland calchrated for grouse. The highest point i chain is at these fell a few miles north west of the north western an the county. A part of this is known as the Craven district and rese the lake districts of Comberland and Westmoreland. approached in fact gone through by taking the train from Leeds what is called the Little North Western, and booking for Lancaster. utiful trip, as the line goes near some of the best scenery. This hilly trict forms a great blank in the railway map, owing to the difficulties making roads, canals, or railways. To those who have the physique we recommend a pedestrian tour through this wild and comparatively known though beautiful country from Pateley Bridge to Ingleton, and nee returning across to Barnard Castle. The Valley of the Ouse in the ale of York commences very near the River Tees on the western boundary the country, and extends southwards, but presents few if any remarkable enes of natural beauty.

The Rivers of the county are the Humber, Ouse, Ure, Swale, Nidd, Vharfe, Aire, Don, Foss, Derwent, Hull, Esk, Torne, Ribble, Tees, and me lesser streams which are tributary to these, or which leave the ounty before they become of importance. The first of these, the Humber, formed by the confluence of the Ouse with its tributaries, the Ure ad Swale, with the Trent, Aire and Don. The Wharfe---which ives its name to Wharfedale-is one of the most beautiful streams 1 the Island; it rises in the Western Moorlands and flows past Bolton LBBEY, where it constitutes one of the charms of scenery which should be isited before there is any necessity to go abroad in search of the beautiful. he passage of "The Strud" by this river is the subject of poems by Vordsworth and Rogers. To explore Wharfedale, we should recommend he ascent of the river from the Leeds point. A pedestrian excursion com any of the stations between Leeds and Thirsk will repay the labour nd supply a photographer with a portfolio of exquisite effects; but ARTHINGTON is the most convenient spot to leave the line.

The Air or Aire river is remarkable for running underground during a art of its course. Its point of re-appearance is a very romantic spot alled "Malham Cove." The Upper part of this stream might follow the xploration of the Wharfe.

The DERWENT is the only important stream descending from the highands on the eastern side of the county, near Robin Hood's bay, in the Eastern Moorlands. On this river are the spots known as Harwood Dale, Long Dale, Deep Dale, and Fronts Dale. Among the places of antiguarian interest upon its banks are the ruins of Kirkham Abbey. trip to explore this river may be taken from Malton on the York and Scarborough branch [Section 9.] Among the smaller streams which are especially associated with beautiful and historic scenes, we ought not to omit to mention the GRETA, which is a prominent feature in the beauties around Barnard Castle, which is approached via Darlington. memories are associated with nearly all of the places we have named, and we promise to any tourist who visits the scenes we have thus glanced at, he will be heartily grateful to us for having opened up to him some of the choicest of English scenery. Indeed whether we turn to the coast views, or the inland prospects, we do not know any line which ought to have more attractions for the tourist than the North Eastern Railway; and no county is more prolific in pictures than that of Yorkshire, though it is less known and less fashionable than districts which are more easily penetrable.

The Geology of Yorkshire is an excellent field for the student, for, a great proportion of the stratified rocks of England may be observed within its limits. The exhibition of the igneous rocks and mineral veins are interesting; the superficial deposits remarkable; and the fossils plentiful. "The elevated western district is based on Palæozoic rocks; the central vale and larger parts of the eastern district are formed on the Mesozoic strata, while in other parts are tertiary and diluvial deposits which may be referred to the Cainozoic period. Tracing these, as it were from above, downwards, we may notice first the silt lands, through which the rivers flow towards the Humber. In the 'Philosophical Magazine' for 1828 there are some curious details of the vegetable fossils found in these silts—one of them, a hazel tree with nuts upon it, petrified, being particularly interesting. Among the peat on the low moorlands, such as Thornewaste and Hatfield Chase, trees, partly changed into coal, have

been found, together with the bones of the fallow deer. The remains of the Irish elk have also been found in the marls beneath the peaty tracts of Holderness. Among the diluvial deposits in the vale of York, animal remains of great interest have also been discovered. There are numerous caverns also, in which bones of extinct animals have been found. Knares is celebrated on other grounds. The Wold Hills are composed of chalk, harder than that which forms the cliffs at Folkestone and Nodular flints are distributed throughout it, and fossil sponges, marsupites, and echinodermata, occur in the upper or later portions. The lowest band is red, as in Lincolnshire, and is quite unconformed to the strata below. On the coast near Specton, there is a blue argillaceous clay which lies under the chalk, and which is peculiarly interesting in a geological point of view. The strata belonging to the Oolitic system are extensive and curious, as it is through the Coralline Oolite that the subterranean streams of Yorkshire penetrate, and in which are found the caverns referred to. The museums of Scarborough and York are built of the Hackness rock. The whole of the rocks belonging to this system are The new red formation of red marls with gypsum, conrich in fossils. stitutes a broad band east of the vale of York, and pure red sandstone on the west near Ripon and Borough Bridge. It contains no fossils. longing to the Palæozoic period, we have in Yorkshire the Brotherton magnesian limestone near Tadcaster, red clay and gypsum (Fairburn and Brotherton), and the magnesian limestone, said to be 200 feet in thickness, and of great importance to the mason. The course of the hills formed of this rock may be traced between Masham, Knaresbro', Pontefract, Broadsworth, and Roche Abbey. These hills are finely escarped to the west, and slope gently to the east. Beneath this rock at Pontefract there is the lower red sandstone series, yielding a yellowish sand or great value to the moulders of metal. From beneath the southern part of the nearly straight edge of the magnesian deposits rise the sandstones, shales, ironstones, and coal, of the West Riding of Yorkshire, and fill an

enormous area in the valleys of the Aire. Califer. Went, Dearn, Down and Don. Leads, Bradford, Halifax, Huddersfield. Penustone. and Sheffeld, are situated near the curved lower edge of the coal strata, while Aberford, Kippax, Pontefract, Elmsall, Conisborough, and Laughton-k-Morthen are near its straighter eastern boundary. The whole of this large area, six hundred square miles in extent, yields coal; the whole series of strata being upwards of 4,000 feet in thickness; and of the call which lies in this series there are about twenty workable beds, yielding about 40 feet of coal of good quality. Ironstones of excellent quality accompany the lower parts of this coal deposit, and the circumstances of the country permit the full attainment of these advantages.

The coal measures are indeed of such importance to the district, that we think our "Gnide" ought not to pass over them too briefly, and we have therefore quoted at some length the following passages from Mr. Hull's interesting and popular work "The Coal Fields of Great Britain." These passages will explain the history of mining, the formation of coal, and the peculiarity of the Yorkshire coal field.

COAL.

The first attempts at coal mining are enveloped in obscurity; but even from the chronicles of those days, when nothing was thought worth recording save the accession of a prince, the feuds of neighbouring states, and the details of a battle, enough has been incidentally noted to enable us to trace back the art of coal mining to very early times.

Its beginning was sufficiently humble; its nature and properties being little understood, there was nothing in the outcropping of a black substance along the sides of a hill or the banks of a brook, to arrest attention; and it is therefore not improbable that from the earliest periods—at any rate from the time in which implements and weapons of metal replaced those of that fossil, fuel may have been employed for smelting purposes. Fortunately, on this point, we are not left altogether to conjecture, as I shall have occasion to show presently.

Like many other treasures of nature, the use of coal did not become general until its necessity had become paramount. While in the days of Anglo-Saxon and Anglo-Norman art, and those which immediately succeeded, the plains of England were overspread with almost continuous forests, growing, as in Staffordshire and Lancashire, frequently in dense luxuriance over the mineralized forests of geologic times, and while these forests readily yielded an abundance of fuel for all the purposes of the times, it was both unnecessary and improbable that the labour and risk of mining should become general. The precious metal was reserved for a generation to whose very existence it is almost a necessity; a generation that, without its aid, could scarcely (as far as we can see) have arrived at the position in art, industry, and navigation, which it has attained in the nineteenth century.

It might scarcely be credited, were it not established on incontestable evidence, that there were coal mines amongst those savage clans and raving barbarians, such as we are generally taught to consider the Britons of pre-historic times. The discovery of a flint axe stuck into a bed of coal exposed to-day in Monmouthshire, is a fact which, like the occurrence of a solitary fragment of a plant in a very ancient rock, proves a great deal more than appears at first sight. If we accept the theory, that flint weapons were the earliest representation of three stages of civilization, of which bronze implements were the second, and iron implements the third, this discovery carries us back to a very early period, antecedent to the invasion of the Romans.

Near Stanley, in Derbyshire, some years since, while some miners were engaged in driving a heading through the "Kilburn coal," they broke into some very old excavations, in which they found axes or picks formed out of solid oak. The implements were entirely destitute of metal, and were cut out from one solid piece of timber. It is hard to imagine the use of such an instrument where iron was known; while it is also difficult to coniecture how an axe of this kind could have been formed without the

assistance of iron. The neighbourhood of these old workings abounds iron ore, several beds of clay ironstone occurring both above and best the Kilburn coal. If the use of these ores had been known, it is scarce to be supposed that the miners would have made use of picks forms entirely of oak. Implements which appear to have belonged to an equal early period, are stated to have been found in old coal workings not Ashby-de-la-Zouch, consisting of stone hammer heads, wedges of flist as also wheels of solid wood.

That the Romans were acquainted with the use of coal, during their occupation of Britain, is highly probable, both from what we know of the character of the race and from circumstantial evidence. stations in many places, close to the out-crop of valuable coal seams, and cinders have been found amongst the ruins of Roman towns and villas. I may here mention a case, which has always appeared to me as probably referable to this period. Wigan, in Lancashire, was a Roman station Not far to the north of that town, a bed of coal—one of the most valuable in Lancashire, and known as the "Arley Mine"-out-crops along the banks of the river Douglas. Not long since, while driving a tunnel to divert the course of the river, this coal seam of six feet in thickness was found to have been mined in a manner hitherto altogether unknown. It was found to have been excavated into a series of polygonal chambers, with vertical walls opening into each other by short passages, and on the whole, presenting on the ground-plan, something of the appearance of a honey-The chambers were stated to be regular, both in size and form. over an area of at least 100 yards in one direction, and were altogether different from anything within the experience of the miners of the district. Local traditions ascribed these excavations to the Danes, though I could not discover upon what grounds. We should probably be nearer the truth in assigning them to the Romans, during their sojourn in these parts.

Britton, in his description of Peterborough Cathedral, renders into modern English the following paragraph taken from the Saxon Chronicle.

of the Abbey of Peterborough:—"About this time (A.D. 825) the Abbot Ceolred, let to hand the land of Sempringham to Wulfred, who was to send each year to the Monastry '60 loads of wood, 12 loads of coal, 6 loads of peat, 2 tuns full of fine ale, 2 neats' carcases, 100 loaves, and 10 kilderkins of Welsh ale, 1 horse also each year, and 30 shillings, and one nights' entertainment." How Wulfred was to send the provident Abbot "one night's entertainment" it is not necessary for our purposes to enquire; but this statement of the chronicler is highly valuable as establishing the fact that coal was at this early period an article of household consumption. It may also have been made use of by the moulders, who were the artificers and craftsmen of their times, in the manufacture of the metal work for the churches and monasteries.

The year 1259 is memorable in the annals of coal mining. the mineral had not been recognised by authority or in any public document; but in that year, King Henry III. granted a charter to the freemen of Newcastle-on-Tyne, for liberty to dig coals. Under the term "seacoal" a considerable export trade was established with London, and it speedily became an article of consumption amongst the various manufac-But its popularity was short lived. turers of the metropolis. impression became general that the smoke arising therefrom contaminated the amosphere, and was injurious to the public health. Years of experience have proved the fallacy of the imputation; but in 1306 the outcry became so general, that the Lords and Commons in Parliament assembled, presented a petition to King Edward I., who issued a proclamation forbidding the use of the offending fuel, and authorising the destruction of the furnaces and kilns of all those who should persist in using it. was the year before the monarch's death, and the year which saw the overthrow of his life-long attempts upon the throne of Scotland, through the intrepidity of Robert the Bruce. But the proclamation against coal was as abortive as the endeavours to conquer the patriotism of the Scots. Prejudice gradually gave way as the value of the fossil fuel became better

been deposited under water, and hence it was supposed that in order to become the receptacles for the growth of luxuriant forests, they must have been elevated into dry land, and then, after having been covered by vegetation, again submerged to be overspread by sands and clays and other sedimentary materials which combine to form the strata of the coal measures. This theory required a series of oscillations over a large extent of the earth's surface, which seemed rather improbable, and not in accordance with observations on changes of level which have been made in various parts of the world. That there are slow elevations, and subsidences of the surface in operation more or less extensively, is proved by phenomena exhibited on our sea coasts, where, in some cases, old sea beaches are found at elevations far beyond the reach of the waves, and in others, where forests, and even towns, are known to be engulphed; and the whole of the geological record teaches us that similar vertical movements have been taking place from the earliest periods.

Let us suppose that a certain bed of coal has been completed by the growth of luxuriant plants over a low-lying tract, subject to inundations from the sea. Rising ground of granitic or schistose rocks in the distance, defines the margin of the basin and the boundaries of a continent from which the sedimentary materials of the coal strata are derived That growth of vegetation marks a period of rest; but now a slow subsidence of the whole tract commences. The brackish waters of the estuary, and the salt waters from the ocean, invade the jungle, carrying dark mud in suspension, with floating stems of trees and frouds of ferns. Presently the mud subsides, and covers in one uniform sheet the accumulated vegetation of centuries. The process of subsidence goes on, while the seacurrent and rivers pour into the estuary fine sand and mud, in which branches and stems of trees from the uplands are included. This process continues until the sinking of the ocean bed either altogether ceases or is counterbalanced by the rapidity with which the sediment is deposited. The basin becomes gradually shallower, and the plants begin to re-appear. commencing perhaps at the coast, and creeping sea-ward until the whole basin is again overspread by a forest of huge cryptogamic trees, arborescent ferns, and conifers, with a dense undergrowth of giant grasses. These, generation after generation, flourish and die, their leaves, branches and trunks, falling around and gradually accumulating till the pulpy mass attains a thickness of 20, 50, or 100 feet.

The process concluded, the basin again commences to subside, the waters return and bury the mass for thousands of centuries; stratum after stratum accumulates till the vegetable pulp is subjected to the pressure of, it may be, thousands of feet of solid matter. Meanwhile chemical as well as mechanical changes ensue, and in process of time what was once a forest is changed into a bed of coal. By a repetition of this process, with local variations, we may conceive the formation of any number of coal seams, amounting in some districts to fifty or sixty, and embraced within a vertical thickness of several thousand feet of shales, clays, and sandstones. Ages roll on, the strata are moved from their foundations; upheaved from the seabottom, the breakers and currents sweep away a portion of the covering, and the mineral treasures are brought within the reach of mining industry.

Derbyshire and Yorkshire Coal Field.—This great field, though forming parts of the shires of Derby, Nottingham, and York, is physically one; and in the treatise of its structure and resources we must ignore political and social landmarks. It is the largest coal field in England, and about 150 square miles smaller in area than that of South Wales.

Its eastern boundary is the escarpment of the magnesian limestone, with its subordinate lower permian strata, which, commencing near Nottingham, extends northwards beyond the limits of the coal field itself. Upon reaching the crest of the escarpment, you find yourself on the edge of a table-land, resembling that of the Oolite of Gloncestershire, but less lofty. One point of this ridge is crowned by the turrets of Bolsover Castle. The southern boundary is new red sandstone, and the strata rise and cross out westward as far north as Bradford and Leeds, where they

bend round to the east, and finally disappear under the magnesian limits stone, which passes over and rests directly on the Millstone Grit. The greatest length of the coal field from south to north is sixty-six milest and its breadth varies from five to twenty miles. Though the general dip of the strata is eastward, there generally occurs along the centre of the field a gentle undulation, which, for a certain distance, produces a westerly dip, but the strata always roll over when approaching the base of the permian rocks. The coal seams are only occasionally broken by faults.

To the westward, the lower carboniferous series rise into the lofty ranges of the permian chain, forming a natural division between the counties of Stafford and Lancashire on the west, and Nottingham and Yorkshire on the east, as well as their respective coal fields. In fact the upheaval of the lower carboniferous rocks has rent asunder a coal field which originally stretched across from Stafford and Cheshire to Nottinghamshire and Yorkshire.

The loftiest escarpment of this central chain is Mickle Fell, formed of millstone grit, 2,600 feet, and the carboniferous limestone of Derbyshire reaches an elevation of 2,533 feet.

In Derbyshire, the principal coals are the "top hard" and "lower hard" seams, producing the valuable splint coal, and in Yorkshire the most remarkable are the "Silkstone" and "Barnsley thick coals." The former is undoubtedly identical with the "Arley mine" of Lancashire, and thus this fine bed of coal, which seldom exceeds five feet in thickness, has originally spread over a tract embracing not less than 10,000 square miles.

Fossil Remains.—These have been summed up by Mr. Denny as consisting of seventeen species of fish (placoid and ganoid). Of Mollusca, five Cephalopods, seventeen Conchifers and Brachiopods. Crustacea, Cythere (Cypris.) In the roofing-shale of several of the coal-beds fish remains occur, and so plentifully in the case of one of these, at Middleton,

that the miners call it the "fish coal." In the roof of the "Halifax coal,"

5f the Lower Coal Measures, Goniatites Listeri is found throughout its

entire course, sometimes beautifully preserved in iron pyrites, and with

this is associated Aviculo-Pecteu Papyraceus.

'In the "Catherine Slack Coal," near Halifax, Nautilus Rawsons and Corthoceras Steinhaueri are frequent.

In the middle coal measures there are bands of ironstone filled, over a great extent of country, with Anthracosia (Unio) and Cythere (Cypris.)

GREAT NORTHERN COAL FIELD OF DURHAM AND NORTHUMBERLAND.

- 1 THE general succession of the strata and their relative position over the
- area of this coal field is similar to that of Yorkshire, so that one section
- will serve to illustrate the structure of both.

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The great northern coal field extends from Staindrop, near the north bank of the Tees, on the south, to the mouth of the Coquet, where it enters Alnmouth Bay, on the north, the distance being nearly fifty miles. Its greatest diameter is near the centre, along the course of the Tyne, which torms the great highway for the export of coal to the London market.

From the Coquet to the Tyne the North Sea forms the limits of the coal field. South of this the escarpment of the lower permian sandstone and magnesian limestone forms the boundary at the surface; but the coal measures underlie these newer rocks, and since Dr. W. Smith, first on theoretical grounds and afterwards by actual experiment, demonstrated the existence of the coal field at Haswell, near Durham, both the triassic and permian foundations have been perforated over a large area, especially at Seaham and Ryhope, in Durham. The general dip of the strata is easterly, as far as the margin of the sea, where they are almost horizontal. The permian strata are unconformable to the coal measures, and from the mouth of the Tyne, southwards, they rest successively on lower beds, till, at the south end of the coal field, they finally overlap the whole coal

series, and for a distance of forty-eight miles (from the bank of the Tea to the margin of the Yorkshire coal field) repose directly upon millston grit and yondall rocks.

From below the coal field of Durham and Northumberland, the lower carboniferous rocks rise towards the west and north into swelling moorlands and ultimately into the mountainous tract of the permian chain, attaining at Hedge Thorpe, a height of 2,347 feet, and at Yeavering Bell, 2,000 feet General series of formations.

New red sandstone.—Red sandstone and conglomerate.

- 1. Upper permian marls, with gypsum, 100 feet
- 2. Crystalline limestone, with Schizodus Schlotheimi, and Mytilus septifer.

Permian rocks (magnesian limestone)

- 500 to 600 feet.
- 3. Brecciated limestone (Tynemouth Cliff) lying 4. Fossiliferous limestone, with Productus Stre-
- phalosia, Athyris, Avicula, &c. Permian rocks 5. Compact limestone, with similar fossils.

- 6. Marl slate, calcareous shales and thin-bedded limestone, with fishes of the genera Palæoniscus, Acrolepis, Platysomus.
- 7. Lower permian sandstone, with gypseous marl 200 feet.
- Coal measures, 2,030ft.—1. Upper series, with thin coals, and a band of ironstone with Authracosia . . . 900 feet.
 - 2. Middle series, from the "High Main Coal" to the "Low Main Coal" . . . 430 feet.
 - 3. Lower coal measures, with two beds of coal. between two and three feet thick . 700 feet.

Millstone grit Coarse grits and shales . . 414 feet. Youdale rocks...... Shales with bands of limestone and thin

Scaur Limestone.......... Ten beds of limestone, parted by as many beds of shale, containing coal seams in North-umberland, upwards of 1,120 feet.

Coal Seams.—The most important coal in the Newcastle district is the "High Main" or "Wallsend" seam. It is the highest workable coal, and varies from five to six feet in thickness. It is traversed by the "ninety fathom" dyke, and is persistent in its general character to its northern and western outcrop, but southward towards the valley of Wear is split up into two seams by the intercalation of sandstone and shale.

The "Bensham" seam, twenty fathoms below the 'High Main," is very variable in its qualities, and is often unworkable. It acquires its chief value towards the east, and is worked extensively under the magnesian limestone at Sunderland. Its general thickness is six feet.

The "Low Main" seam is known to range from Widdrington on the north, to Ferry Hill on the south, a distance of about forty miles. This coal, south and west of Newcastle, is moderately soft, and excellent for household use and cooking. But passing northwards its character changes; it becomes very hard and less gaseous, and constitutes the most important bed of steam coal. Below these lie several other seams, which will become more extensively worked as the supply from the valuable beds above described becomes curtailed.

The following is a list of the general series of coal seams, for which I am indebted to Mr. Dunn.

Coal series of Northumberland and Durham. (Newcastle District.)

							Ft.	in.
	Upper coal	meası	ires	•	•	•	900	0
1.	High Main						6	0
	Strata .		•		•	•	33	0
2.	Metal coal			•		•	1	6
	Strata .					•	33	0

- 8. Total quantity under 4,000 feet of depth 3,158, which added to 4,274, gives 7,432 millions of total control of the control of the
- 9. This, at the present rate of consumption (about 15,900,000) would be for 446 years.

This coal field contains 268 collieries, producing (1857), 15,826,52 tons of coals.

There are also sixty-nine furnaces, of which forty-one were blast in 1857. Of these, eighteen are in Northumberland, fifty-one in Durham Total produce of iron, 347,750 tons.

Mr. Fordyce in his work just published (1860), gives two estimates of the area; one of 840 s uare miles, and the other 750. It will be observed that this latter closely agrees with that arrived at by the author.

The results at which we have arrived, are briefly as follows:-

- 1. There are coal deposits in various parts of England and Wales, all depths, down to 9,000 or 10,000 feet.
- 2. That mining is possible at a depth of 4,000 feet, but beyond this, the high temperature will prove a barrier.
- 3. The temperature of a coal mine at a depth of 4,000 feet, will probably be found as 120° Fahrenheit; but there is reason to believe, that by the agency of an efficient system of ventilation, this temperature may be reduced, at least during the cooler months of the year, so as to allow d mining operations without unusual danger to health.
- 4. That for working mines of a greater depth than 2,000 or 2,500 feet, under-ground stages, with independent winding machinery and engines, will be found not only to render very deep mining practicable, but also to lessen the amount of risk from accident.
- 5. Lastly. Adopting a depth of 4,000 feet as the limit to deep mining, there is still a quantity of coal in store in England and Wales, sufficient to afford a supply of sixty millions of tons for about one thousand years.

The following are sketches of some of the fossil plants found in the coal measures.

2,150 persons. It is situated on the right bank of the river Aire, which is spanned by a handsome stone bridge. There is a church, and chapels of various denominations; also an infant school. The employment of the inhabitants is derived from coal mining, glass making, and pottery, which occupations have attracted a considerable number of persons into the locality since the last census. The church is believed to stand on the site of an old Roman camp mentioned by Autoniaus as Lagetium, and many relics have been found in the vicinity.

At a short distance beyond Castleford the tourist will notice a line of railway on his right, which is the branch from Knottingley (to be noticed hereafter), and shortly after he will arrive at

BURTON SALMON,

Which is seven and three-quarter miles from Normanton, one hundred and seventy-three and a-half from London, and sixteen from York. It is a very unimportant place, the whole population of the township in 1851 being only two hundred and forty. The Knottingley Branch (Section 2) here runs into the main line, though the junction is not officially recognised until the traveller arrives at

MILFORD JUNCTION.

Milford Junction is the point at which the traveller may probably be required to show his ticket, and apropos of that we may just throw out a hint. The production of a ticket is only inconvenient to those who are not systematic, or who are deficient in forethought. To habitual travellers it produces little inconvenience, because they unconsciously adopt a code of rules something like the following:—1. Remember that the ticket is always put in the same pocket or place, so that it will be found always in the same pocket without having to hunt for it. 2. Remember not to put it into any inside pocket lest you have to suffer the inconvenience of having to unbutton an overcoat or unwrap your cloak.

3. Remember that the discipline is necessary to keep people from blundering, or from cheating the company.

4. Remember that "order is

heaven's first law," and that companies which are careless in systems Dig' not safe carriers. 5. Remember that the ticket collector is not the pathe to blame if you are unwise enough to be provoked.—Milford Junction Take the point at which passengers going east or west change carriages. Perso vis coming south from York have to change here for Hull, Selby, or Mark li Weighton on the one hand, or for Leeds on the other; parties booking Normanton by a London train have also to change here or they would be taken on to Knottingley. Milford is important solely as a point or railway divergence as above described.

SHERBURN

Is a little township, which contained in 1851 1440 inhabitants. distant from Normanton nearly twelve miles, being about half-way between that place and York; it is 1772 miles from London. Its inhabitant are employed by the stone-quarries in the vicinity, and there as also flour mills and orchards. Teasel is cultivated in the fields also This plant continues to be essential to the cloth manufacturer, despite all the ingenious attempts to invent a metallic substitute, though some of the inventions seem to possess all the required conditions. The teasel is the head of the thistle Dipsacus Fullorum, and is in such demand that in 1858 there were nearly fourteen and a-half millions of the heads of this plant imported from abroad. The objects of teasling is to raise up the loose filaments of the woollen yarn into a nap upon one of the surfaces of the cloth by scratching it with thistle heads such as described. These heads are really a conglomeration of the seed vessels of this peculiar thistle, below each of which is a long scale ending in elastic points that turn down like hooks. The peculiar advantages of the teasel over the substitutes which have been provided are that the hook, whilst it is very penetrating and tenacious, will not tear the cloth, but will rather break or be pulled out.

Sherburn is an ancient place. Athelstan had a palace here, out of the ruins of which the church is said to have been built. Here Lord igby, in the great civil war, received defeat from Colonel Copley with the parliamentary forces. The town is situated on the old road from adcaster to Ferrybridge. The church is a handsome structure worth a sist. There is also a richly endowed grammar school, about which too ittle is known.

CHURCH FENTON

Is the next station, 13½ miles from Normanton, 10½ from York, and 180 from London. It is noticeable only as the junction for Harrogate, which lies on the north-west, or left hand side of the road.

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ULLESKELF.

This is another unimportant village, the inhabitants in which in 1851 only numbered 485. A ride of a mile or two brings us to

BOLTON PERCY,

Another little village, containing in 1851 less than 300 inhabitants in the township. It is 183½ miles from London, and 7½ from York. In the church are some monuments to the Fairfax family. Steeton, an adjoining township, is mentioned in our geological review of Yorkshire.

(Vide ante.)

COPMANTHORPE

Is 4 miles from York, and 187 from London. It is a place of no importance or interest except for sustication.

YORK.

How changed are the times when now the railway winds its iron path right through the city walls of the old fortified stronghold of the north. Filled with objects of interest, quiet York reposes on the past as if satisfied with its architectural beauty and its historic associations. In 1851 the population was 54,324, in 1861 its inhabitants numbered 59,965, it had

therefore increased by 5,643, which was more than could be accounted by the excess of births over deaths by 337, thus showing that the old is attracting strangers to settle within its limits.

York was originally a town of the Brigantes, and was converted in Roman Station by Agricola, A.D. 79. It shortly became the prin station of the province of Britain, and the residence of the emperors they visited the island. One of the towers and a portion of the Roman fortification is still preserved. For more than a century afte departure of the Romans, we have no account of York till the king of Northumbria was constituted, when York became the capital, an mained a place of great importance at the data of the Norman conc Here Edwin was baptised by Paulinus; and here the first metrope church was raised; here, in the reign of Edgar, the Witenagemote held in 996; here Siward, the invading Dane, was buried in chri burial; here Saxons and Normans fought without mercy to each o and here the Conqueror's vengeance was most terrible; here "the battle of the standard "took place, when Stephen of England defeate Scottish King David; here were the unoffending Jews massacred in reign of the second Richard; here, in 1298, the Parliament assembled the army of England mustered, preparatory to the invasion of Scot here Queen Philippa collected her forces, while her husband foug Cressy, to resist the invasion of David Bruce; here were some o bloodiest frays between the Red and White Roses; here, after the 1 of Marston Moor, the mistaken zeal of the Parliamentarians was disp in the city they had previously desolated.

York Minster, although wanting uniformity, is yet a magnificent s ture. It is badly situated, moreover, but its mass, and the extent of section, give it an imposing effect. The north-west front, represented i engraving, is especially remarkable for its beauty. The central then have been more effective if it had belonged to a less imposing the sit is it leaves the impression that it is too small. It has



YORK MINSTER

as an excuse that it was intended to carry a spire, but if it were so urpose appears to have been abandoned before the upper part of the was completed. The Minster consists of a nave, choir, and Lady el, each with its two aisles; also north and south transepts, with two and a lantern in the centre; a chapter room with a vestibule on the side. The elevation of the north transept presents five tall and very iful windows, commonly known as the five sisters, above them are ther lancet windows of various heights. The south transept is richer ail but less regular. The nave is remarkably beautiful, being uned by anything of the kind in England. The screen is singularly ate, and upon it stands the organ, which, till recently, held undisthe highest reputation in the kingdom. The Minster must be seen appreciated.

During the Commonwealth the interior of the cathedral was much injure by the fanaticism of the Puritans. There are, however, many monuments of great beauty which still remain uninjured. The earlier cathedrals were successively destroyed by fire, and the present Minster has twice, during the last half century, narrowly escaped. The first occurred on the 2nd of February, 1829, when a maniac, named Jonathan Martin, deliberately fired the building, destroying the whole of the roof of the choir and woodwork on each side, the organ was also burned, and the altar screen so much injured as to render a new one necessary. Scarcely had the repairs been completed, when a second fire, scarcely less destructive, occurred on the 20th May, 1840, in consequence of the carelessness of a workman. By this conflagration the south-western tower with its fine peal of bells was destroyed, the writer narrowly escaping being buried in their ruins. The reconstruction of the injured parts of the structure was conducted by Sir Robert Smirk, at a cost of £100,000. A new peal was given by Dr. Beckwith, and a large bell was purchased by subscription. This immense instrument is the largest perfect bell in the kingdom, weighing eleven and a half tons, four tons more than Great Tom of Oxford.

We must, for want of space, leave the minor antiquities of York to be studied from the local guides and similar works which can be consulted by the tourist at all the leading hotels. We may, however, state that the old castle and new jail, the museum and botanical gardens, are specially worth a visit. Nobody would think of visiting York without a promenade around the walls.

The employment of the people is dependent partly upon flax-spinning, glove making, and other appliances in leather; but the most extensive businesses are those of the wholesale confectioners and druggists. The wholesale tea and coffee business is also reported to be large.

Among the trades carried on in the city we notice also those of basket making, brass founding, brick making, chicory grinding, coach building, comb making, glass blowing, mustard grinding, rope and sail making, and the manufacture of umbrellas, clocks, and whips.

In the museum of the Yorkshire Philosophical Society there is a favourable opportunity for the geologist to investigate the Yorkshire strata, but the institution is also rich in antiquarian relics and specimens of natural history. The York Institute of Popular Science and Literature is a spacious building devoted to the middle classes. The Assembly Room used to be considered the finest in the kingdom.

The York races are celebrated meetings. The Archbishop of York is the primate of England; his ecclesiastical province includes the dioceses of Carlisle, Chester, Durham, Manchester, Ripon, Sodor and Man, and York. The palace of the archbishop is at Bishopthorpe, near the city, and his income is fixed at £10,000 a-year.

SECTION II.—FROM KNOTTINGLEY TO MILFORD JUNCTION.

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EXPLANATORY.

THE North-Eastern system south of York, it will be remembered, commences at Knottingley on the one side and at Normanton on the other. It will therefore be necessary to return and to retrace our steps from the point at which the Great Northern joins the North-Eastern system.

KNOTTINGLEY.

This is the only important place upon the branch now to be described, but this section is important as constituting the link of connection in

THE BEST ROUTE FROM LONDON TO SCOTLAND

by the Great Northern, and then by the North-Eastern system. Knottingley is also the point at which the Lancashire and Yorkshire line by a Junction extends to Goole. As we propose to deal with the Lancashire and Yorkshire system in another volume, it will be unnecessary to refer to this matter at this point, further than to say that it has lent a new importance to the town of Knottingley, which is a first-class station.

It is situated in the County of York, and in 1851 contained 4540 in-

habitants in the chapelry, (which belongs to the parish of Pontefract) has probably increased greatly since that date, though the details of returns of 1861 are not yet published, so as to enable us exactly to 🐗 mate its growth. We may, however, form an approximate opinion in the fact that in the Superintendent Registrars district of Pontefract, the Union in which Knottingley is included), there were, in 1851, 6,3 inhabited houses, whilst in 1861 there were 7,475; the population of Union, moreover, increased in that decennial period from 29,937 34,752 inhabitants, despite the attractions of the manufacturing cents near it absorbing a part of its population. Knottingley is 171 mile from London, 23 from Pontefract, and 20 from York. It was est celebrated for its production of limestone, and there are brick and works, potteries, breweries, boat-yards, and large corn mills. various demands for labour, combined with facilities for the exportation its productions, render Knottingley a busy place. It is situated on the right bank of the river Aire, at its junction with the Knottingley Goole canal. The church is a handsome edifice, but the other edifices at unimportant in an antiquarian point of view.

SECTION III.—FROM MILFORD JUNCTION TO LEEDS.

WE shall now suppose the traveller to have started from Knottingley and to have passed Burton Salmon (page 49) for Milford Junction, both of which places together with the district have been already described under Section I. We shall therefore proceed to trace the third section of the southern part of the North-Eastern system, which by the line from Milford Junction to Leeds complete

THE BEST ROUTE FROM LONDON TO LEEDS.

We shall assume that he has booked through by a Leeds carriage, so a to avoid the inconvenience of a change of carriage at Milford, though the

row himself upon their courtesy instead of—as is too often the case—sillying the attendants for fulfilling the regulations of the Company by hich they are employed. After leaving the Junction the little town of lifered lies on the northern or right side of the line. A few miles further the will pass the little village of Michlefield, a township which in 851 contained only 426 inhabitants, and at a short distance beyond he will be carried past

ng:

GARFORTH,

Which is the most important intermediate station. The parish in 1851 contained 1325 inhabitants, having only 196 in the census twenty years before, so that it is a rapidly increasing place. Manston and Cross that are two other unimportant intermediate stations, before the traveller is carrives at

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LEEDS.

This important town is 205 miles from London, about 25 miles from York, and constitutes the centre of one of the most important manufacturing districts in England. In 1851, it contained 21,061 inhabited houses; in 1861, there were 24,999, showing an increase at the rate of 400 houses a year. The population of the union in 1851, was 101,343; in 1861, it was 117,553, showing an increase of 16,210 in the decennial period. The actual rate of increase by excess of births over deaths was 11,079, so that the remaining increase must be attributed to the emigration from the agricultural districts, where wages were lower and employment more laborious, especially for female hands. This, and a series of corresponding facts, have led to a gradual increase in agricultural remuneration, and thus we see that the factory operative not only obtains good wages himself but actually improves the condition of the peasant.

Leeds is a market town, a municipal and parliamentary borough, and the seat of a Poor Law Union. The celebrated Dr. Hook, was until recently Vicar of Leeds, and the services in the parish church (St. Peters) attract visitors from the surrounding districts. The history of this church is, in effect, an ecclesiastical history of the town; while the modern changes, in part introduced by Dr. Hook, have also their points of interest.

Thoresby thinks it probable that there was a manse and church here during the Saxon Heptarchy; but it is at any rate clear that the Norman found a church at this place, when the preparatory enquiries for Domesday Book were made. By whom the church was founded, or of what description the fabric might have been, are matters not now determinable In 1089, Baron Paganel founded a Benedictine Priory at York, and among the estates or property given to it were the "church of & Peter's, at Leeds," and the "chapel at Holbeck," which Holbeck is not one of the busy suburbs of Leeds; so that we have a clear record of the history of these places seven centuries and a half ago. The revenues of the church were divided: one-third for the vicar, and two-thirds for the priory; "by which means the church was deprived of two parts in three of its primitive revenues, by the avarice and sacrilege of the monks, who in the conclusion, left their secular clergy to feed upon the crumbs the fell from the regulars' table, till the Bishops made a stand against the growing evil." In 1242, at the instance of one of the Bishops, formal agreement was made between the Prior and the Vicar, respecting the partition of the revenues; but this did not obviate the necessity for a further arrangement in the next following century.

The old structure—the venerable remnant of past ages, patched up from time to time, to maintain something like efficiency—was at length brought to the end of its days. It was pulled down in 1838. Consequent on certain ecclesiastical changes in the parish, a new St. Peter's Church was resolved on; and the architectural skill of Mr. Chantrell has been

in requisition to produce the new structure, which was finished in 1340. It is one of the best among the modern specimens of the pointed 151e—in that variety which is designated the later decorated.

The town is situated upon the slope and summit of a hill rising on the rist bank of the river Aire, the northern and southern parts being onnected by a freestone bridge. There are also two suspension bridges and three others of stone. The borough is very advantageously situated for trade, being placed in the heart of the inland navigation of the country, whaving a communication with the eastern seas by means of the Aire and Calder Canal, &c., and with the western seas by means of the Leeds and Liverpool Canal, forming a water way into the Mersey. A glance at a map will show how advantageously it is situated with regard to railways. The magnitude of the Aire and Calder traffic may be judged of from the enormous warehouses belonging to the company; they can be seen from the bridge at the bottom of Briggate.

The streets of the older parts of the town, with the exception of Briggate, are generally narrow and crooked. The eastern division of the town is intersected by a small stream called the Addle Beck, which "hardly knows itself." It is in the vicinity of this Addle Beck that a vast mass of the working population are located. But the worst parts of the town are close squares of houses, or "yards" as they are called, which are very numerous in Leeds. These airless, cheerless, dirty, ill-drained, neglected receptacles for human beings, are fit companions for the wynds of Glasgow and the cellar-dwellings of Liverpool: they are the dark spots on the social pictures of our great towns—spots which it will require an immense amount of municipal exertion to wash clean. The newer streets are wider and straighter. The largest public buildings are the New Town Hall, in Park Place, and the Cloth Halls. The Town Hall is—to our taste—the most beautiful building of the kind, and though not so large as St. George's Hall in Liverpool, is more perfect as a work of art. It is well worth a visit.

The Cloth Halls were the result of a necessity arising out of the growing trade of Leeds; where the market for unfinished cloth was formerly held in the streets. The two cloth halls are of very great extent. The coloured Cloth Hall measures 128 by 66 yards, and the white Cloth Hall is nearly as large. The scene on Tuesday and Saturday, when the market is held, is very striking, both to the ear and eye. The Commercial Buildings are used as a news room and offices. The building is of stone throughout, and is a good specimen of Grecian architecture. The central market for provisions is one of the principal ornaments of the town; it has a handsome Grecian elevation, and cost £45,000. The Com Exchange with its Ionic elevation is very handsome also, and the Scotch Exchange is a fine building. The borough jail cost £43,000; it was erected in 1847. When will such sums be spent upon eradicating the seeds of crime by Ragged Schools and Reformatories?

There are within the borough about twenty places of worship belonging to the establishment, and upwards of sixty chapels for nonconformists. The energy of Dr. Hook gave a new impulse to the religious feelings of the town. After he entered upon the Vicarage three old churches were rebuilt, and twelve new churches erected, each with a separate parsonage. The rebuilding of the old church cost £30,000. It is a spacious cruciform edifice in the decorated style of architecture. The rich stained glass and wood work in St. Lawrence's is worth a visit. Among the nonconformist chapels, that belonging to the Unitarians, on Mill Hill, is perhaps, the most remarkable as a specimen of the perpendicular style of architecture.

The Leeds Grammar School has endowments to the extent of £2,000 a year; and is free to the sons of all residents or of natives. In Leeds, Dr. Priestly founded a large library, which has by lapse of time become more and more valuable. The Literary and Philosophical Institution is superior to most of its class; the Museum under the care of Mr. Denny—a naturalist of great ability—is especially deserving a visit. An introduction to the obliging curator will render the inspection doubly interesting.

The Mechanics' Institution of Leeds is one of the most complete in the try; possessing a library of 8,000 volumes, and numbering nearly members. The Infirmary occupies a very high rank also as a lie institution. It has accommodation for more than 150 patients—sociated with it is the Leeds School of Medicine—neither a very good a very flourishing institution. The facilities for the students of clicine are always limited in the provinces; and the broad liberal intellence which should characterise the medical man is not likely to obtain lature amongst the petty jealousies and cliques which too often prevail hongst the practitioners of provincial towns.

The principal manufacture of Leeds is that of woollen cloth; and the own is the centre and market of a large number of villages and hamlets or miles around, where the residents are supported solely by weaving voollens. Flax spinning also is a staple trade; the mill of the Messrs.

Marshall being the largest in the world.

The importance of the woollen manufacture in England may be judged from the following statement. In Great Britain, in the towns dependent chiefly upon the manufacture of wool, the population has increased in the following ratio:—

1801.—169,495.	1831.—350,857.
1811.—195,515.	1841.—425,555.
1821.—260,691.	1851.—507.886.

5 i

In the majority of flax-mills, the operations cease with the spinning of the fibres into yarn, and the weaving is effected elsewhere, chiefly by hand-looms; although there are many factories in which linen-cloth is manufactured by the aid of the power-loom.

The chief seats of the linen-cloth manufacture are, Belfast in Ireland, Barnsley in Yorkshire, and Dundee and Dunfermline in Scotland. In Barnsley, the fabrics manufactured consist of linen, huckaback, diaper, duck, check, drabbet, tick, towelling, and union, a mixture of the

staple with cotton. The fabrics made in Ireland are, coarse fine linens, canvas, sacking, and damask. The manufactures at Durage mostly confined to coarse linens and sailcloth; while at Durage line, fine shirtings, damasks, and table-cloths, &c., are the print fabrics made.

Prior to the introduction of machinery, the linen trade was very limin extent. On the introduction, however, of improved mechanism increased rapidly. Mr. Marshall stated that the trade had doubled England, and trebled in Scotland, in the course of half a century.

According to the Return of the Board of Trade, the declared value the exports of the linen manufacture in 1852 was £4,231,786, and 1853, £4,791,252. Linen-yarn was exported in 1852 to the extent 23,928,592 pounds, value £1,140,565; in 1853, the number of pow was 22,782,661, the value, £1,149,103.

The most recent Factory Return, of date 15th August, 1850, present to parliament, states the number of flax factories in the United Kingd at 393—of which England and Wales possessed 135, Scotland 189, Ireland 69. The number of spindles in the 393 factories amounted 965,031, and the power-looms to 3660, absorbing a power of 10, horses in steam, and 3887 in water power. The total number of has employed was 68,434; of which 47,617 were females, and 20,817 male

We shall now in imagination RETURN TO MILFORD JUNCTION; accompany the traveller upon an imaginary journey from that point.

SECTION V.-FROM MILFORD TO HULL.

Thus line runs nearly due east and west, passing the old junction, far from which on a clear day the traveller may catch a view of Y. Minster. Nearly due north he will arrive at

HAMBLETON,

Which is rather more than three and a half miles from the junction;

n unimportant station, containing no object of interest except the second, with master's house, which was erected by subscription in 6, and to which an allotment of land was assigned under the land was assigned under the land was assigned under the

SELBY.

market town, formerly of considerable importance, at which a small aritime trade is still carried on by means of a branch of the river Ouse, wer which there is a curious wooden bridge. Its population in 1851 as 15,672, and in 1861, 15,985, so that its population is not increasing in proportion to the number of births, which should have shown an increase of 1,858, instead of 313.

The old name was Salebia. It was the scene of some of the contests in the parliamentary wars, and was taken by Fairfax in 1644. There is a fine old Gothic market cross; but perhaps the church which is a part of an old abbey of the Benedictine monks is the most noteworthy object in the town. It is a magnificent cruciform structure, 300 feet long and 60 feet wide. The nave is a fine specimen of Norman architecture, the choir is decorated, and beyond it is a very beautiful lady chapel. The canal communicates with Leeds. Iron and brass founding, boat and barge building, brewing and tanning are carried on. The abbey is said to have been founded by William the Conqueror, and Henry I. his son was born here.

Resuming our journey towards Hull we may premise that the line to that port is nearly a straight one, and the traveller who looks out at the windows of his carriage, on either side, will have the opportunity of studying some of the curiosities of perspective—for there is neither tunnel or embankment throughout the distance. Crossing the Ouse by an iron viaduct at a distance of little more than a mile we arrive at

CLIFF.

Which is situated on the old channel of the Ouse, and which is more

remarkable for the interest which attaches to the decayed town of lines ingborough on the south or right of the line. The spire of the cornciform church is 126 feet high, exclusive of the tower. Hemingham was an old Roman station. Travelling onwards, on the left or not the line Wressle Castle is situated on the river Derwent, which presently crossed by an iron swing-bridge or viaduct. Wressle Castle dates from the 14th century by the Percys, who held royal state Wressle. The building was dismantled by parliament in 1650, in the just belief that internal fortifications are dangerous to popular liberations to the Wyndham family. Shortly after crossing to Derwent we find ourselves at

HOWDEN

And are now in the East Riding of Yorkshire. Howden is another reaction ancient market town, and is the reputed capital of "Howdenshire," a county of which few travellers have heard, except in the locality. He again we find traces of William the Norman, who gave to this town to see of Durham, one of the bishops of which founded a college here in 1266. The cruciform Gothic church of this college, with its fine tower handsome east window, and beautiful octagon chapter house, are we worth a visit. Howden is celebrated for its horse fair; Spaldingte Grange, the ancient seat of Lord Howden, is in the neighbourhood, at the visitor will be treated courteously.

EASTRINGTON AND STADDLETHORPE Are unimportant stations; the former belonging to a township containing in 1851 but 386 inhabitants; the latter not appearing in the census all. A little beyond, the Market Weighton canal—a straight line from the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the Humber is appeared and the translation of the containing that the containing that the containing the containing

that town into the Humber—is crossed, and the traveller is on the straitill he arrive at

BROUGH,

An ancient village which would have ceased to be it its ferry had no

useful and important. Here was a Roman station to guard the sing from the Lincolnshire side. Three miles to the northwards is picturesque little town of South Cave, worthy of being held in peral memory as the place from which Washington's family emigrated 'irginia. There is a fine view from the castle. Three miles beyond ugh the train brings the tourist to

FERRIBY,

small township containing about five hundred inhabitants. The nber is here two miles broad; on the opposite shore is South Ferriby incolnshire. The name of the place explains the original and ent occupation of the inhabitants.

HESSLE

ather more active in its life. The town contained 1576 inhabitants 851. J. Pease, Esq., resides at Hesslewood House, which has a fine r of the river. Tranby House is another fine mansion, occupied by Barkworth. The village will in the course of a few years be a arrb of

HULL,

tich is four and a-half miles distant, and which is the most importtown in the district. The Registrar's district which bears its
ne, contained in 1851, 50,670 inhabitants, and in 1861, 56,889, so
t it had increased 6,219 in its population in the decennial, a rate more
n 2,000 over the increase arising from an excess of births over deaths.
s clear therefore, that Hull has industrial attractions which will cause
apidly to go on in its social and material progress. Hull, or more
perly Kingston-upon-Hull, is situated upon the river Hull, and is a
liamentary town and port. The parliamentary borough in 1851 conned 84,690 inhabitants, and it has since gone on increasing in the same
io as its registrar's more limited district. It returns two members to



HULL, FROM THE MOUTH OF THE HARBOUR.

parliament. Edward II. caused it to be fortified, and in the civil was the first fortified place which closed its gates against Charles who beseiged it in person in 1642 and 1643; but found it too strong him. The site of the old fort is now occupied by the floating docks two basins which have rendered Hull so important in modern times. rise and growth of the port is thus described in "The Land we Live i

So far as matters meet the eye of a modern observer, the history of Hull docks furnishes the history of the town; for to those docks owing nearly all the wealth which Hull possesses. The vast treasure cast and west meet here as at a point. Russia and Sweden, Denmand Norway, Holland and Germany, send to Hull their timber, their i their hemp, their tar, their tallow, their bones for manure, their corn food, their flax and linseed, and their hides and skins; while Hull is m

point of export for the cottons of Lancashire, the woollens of Yorkire, the pottery of Staffordshire, the cutlery of Sheffield, the hosiery of nicester, the bobbin-net of Nottingham, the metal wares of Birmingham, e steam-engines and machinery from our great manufacturing towns, all the ports which line the eastern side of the German Ocean.

Hull claims a pretty fair antiquity for her commerce and shipping. It believed, that as early as A.D. 1200, Hull was one of the appointed laces for the export of wool. In all that relates to the port of Hull in arlier times, the river Hull was the part alluded to, rather than the Humber in front of the town. Every successive century brought forward steady increase in the trade of Hull; until at length some measures were imperatively called for, having for their object the enlargement of the harbour, and the better accommodation of shipping.

It has been a fortunate circumstance for Liverpool, and is (or has been) an unfortunate one for Hull, that in the former case the docks belong to the Corporation, whereby the arrangement in respect to docks, dock dues, new works, repairs, dredging, and the numerous matters which bear on the practical management of a port, are free from the clashing of interests between the town authorities and the dock authorities; whereas at Hull, the docks belong to a private company, between whom and the Corporation there has not been that cordiality and unanimity which would lead to well arranged plans.

Before the construction of any of the docks, the shipping business used to be conducted along the northern shore of the Humber, within the limits of the town, and for a distance up the river Hull; but by about the year 1770 the trade of the port had so far increased as to render further accommodation necessary. It was first proposed that the Corporation should make new docks, but this was declined; it was then suggested that the Trinity House should take up the matter; but this body likewise shrunk from the responsibility. Matters grew so bad, that the Government were about to remove the bonding from Hull to Gains-

borough, the latter being situated some distance up the river is 'N Hereupon a company of 'adventurers,' or shareholders, determined by; construct new docks; they formed a stock of 120 shares, to white sist have since been added, on each of which a sum of £250 has with ultimately paid; and so well has the matter answered as a communant speculation, that these shares are worth £1,600 or £1,800 each in its market. The company obtained an Act in 1774, which gave the ve various powers in respect to the Humber and Hull rivers; and in 1788 Old Dock was opened, bounding the town on the north, and opening the river Hull, which in this part constitutes the Old Harbour. Corporation took shares in the Company; and the Corporation and Trinity Board also supplied a portion of the capital as separate bodies receiving certain advantages therefrom, but not touching the dock des Some years afterwards, in 1809, an addition was made to the accormodation of the port, by the construction of the Humber Dock, connect with the Humber by a tidal basin, and bounding the town on the well This left a gap between the north and the west, between the Old and Humber Docks; and this gap was not filled up till 1829, when the Junction Dock, which establishes a communication between the two olds docks, and which bounds the town on the north-west, was opened. It was then that Hull became for the first time an island-for such it effectually is. A large merchant ship can sail completely round the town. A small additional dock may be noticed, called the Ferry Dock. which was constructed in the early part of the present century. merely a small recess, with a wharf and pier, on the Humber frontage of the town.

These three docks, presenting a united area of only twenty-six acres, have accommodated more traffic perhaps, than any other docks in the kingdom; that is, the area in proportion with the shipping is smaller than in any other port. A merchant of Hull, said a few years ago, when missioners were inquiring into the commerce of Hull:—

HULL. 73

Within my knowledge the traffic of Hull has increased very considerably; so much so, that the harbour, which formerly was, with the then existing dock accommodation, sufficient for the port, became so crowded with shipping, that I have heard of one vessel leaving South End (a particular point in the harbour), and arriving at Elsinore before another just behind her could get out of harbour.' Another merchant 'knew a vessel make the passage from Hull to Petersburgh, while a second vessel, ready for sea at the same moment, was proceeding from the Old Dock to the Humber.' A third said, 'I have known forty-three sail of vessels, in two hours and twenty minutes, require to pass through the harbour, which is the highway to the Old Dock; and in 1844, forty-six sea-going vessels and steamers, twenty-eight river craft, and one large raft of timber, passed through the Humber Dock lock in one tide.' This was corroborated by a merchant who had 'known one hundred sail of vessels come out of the Old Dock in one tide.'

What is called the Harbour, or the Old Harbour, is, as we before remarked, merely the lower portion of the river Hull, near its junction with the Humber; it bounds the town on the east, and is lined on both sides with wharfs and warehouses. This portion of the river is about two-thirds of a mile in length, and from fifty to eighty yards wide. It is used by vessels of various tonnage for taking in and discharging their cargoes along the quays of the warehouses on the banks; as a passage or channel for vessels going into or coming out of the Old Dock; and also as a channel for smaller vessels proceeding to the various wharfs and warehouses lying higher up the Hull, beyond the verge of the town. It is also used by river craft, and other small vessels, as a place of shelter in stormy and tempestuous weather, when it is frequently filled for many days together. It will therefore be seen how unavoidably must such a place be crowded; and we can imagine how a foreigner would be struck by such a spectacle of intense activity as this bit of river presents. The four purposes above enumerated give to this portion of the river Hull an amount of business which is perhaps not paralleled in an equal space in any country; because in most other commercial ports, the docks can be reached without having to pass through such a busily-occupied portion of river.

All improvements in this port are difficult, on account of the diversity of interests and privileges involved; these are, happily, not insurmountable, as the recent works have shown; but they require an unusual amount of discussion and struggle. The public bodies who have control over the port are, the Municipal Corporation, the Corporation of the Trinity House, the Dock Company, the Dock Commissioners, the Pilot Commissioners, the Commissioners of the Holderness Drainage, and the Railway Company. It requires no small exercise of sagacity to determine the exact limits of each of these bodies' powers and privileges, and no small energy to induce them to work well together in the same direction; to these are also added the rights of those who hold property on the margin of the harbour, and the rights of the merchants and ship-owners. privileges of all these bodies are the following:—The Corporation receive dues from all vessels using the port, for jettage and anchorage; they also own the Ferry-boat Dock, for market vessels; they are proprietors of the soil of that portion of the river Hull facing the harbour; and lastly, the Mayor is admiral of the harbour. The Corporation of the Trinity House supply the Humber with buoys and lights, and license pilots; all vessels pay buoyage, and a primage is paid on the cargoes from foreign vessels; and this Corporation also appoint the dock and harbour-masters. The Dock Company are owners of all the wet-docks, and receive dues from all vessels using the port, whether going into the docks or not, with certain specified exceptions. The Dock Commissioners have the control and management of the docks and quays. The Pilot Commissioners have the superintendence of the pilots and ballast-lighters; and to this body all vessels above six feet draught of water must pay pilotage. The Holderness Drainage Commissioners (Holderness being the low tongue of land which intervenes between Hull and the sea) have the right to require the Dock Commissioners to remove banks, hills, earth, soil, or rubbish in the harbour within low-water mark. Lastly, the Railway Company are the owners of considerable quay and wharf-works on the western margin of the town.

By the year 1844 the Dock Company had matured its plans for an extension of the harbour accommodation, by the construction of a new dock; and an Act of Parliament was obtained for developing the scheme. By virtue of these plans, there was to be a new dock situated eastward of the triangular island on which the citadel is placed. There was also to be an enlargement of the point of junction, where the Old Dock opens into the Old Harbour, as a means of facilitating the ingress and egress of shipping. And lastly, there was to be a new railway-dock constructed, connected with the railway station, and also connected by a cut with the western side of the Humber Dock. The Company were authorised to raise £400,000 for these works. One of the important clauses of this Act is, that the Docks are henceforward to be managed by Commissioners, so chosen as to represent the varied interests of the town. One important object of this Act is to prevent the unloading of timber ships in the already crowded docks. The Commissioners deemed it necessary to apply for another Act, in 1845, to enable them to enlarge the dimensions of the new Railway Dock, to erect new warehouses, and to lay down all requisite railways along the quays. The Dock Company had to apply for another Act in 1849, to raise more capital for finishing the Victoria The Admiralty on that occasion, insisted on certain provisions respecting the dredging and drainage of the Harbour-a work which all parties had hitherto shifted from one to another.

Thus, when all the works are completed, Hull and its port will present the following features. There will in effect be two islands—the citadel island and the town island, and a triangular belt of dry land around the citadel island. The most bounds the citadel on two sides; while the

Humber bounds it on the third. The new eastern, or Victoria Dock, of twelve or thirteen acres, spreads away eastward of the citadel most; while its two basins give ingress; the one to the Humber, and the other to the Hull. Then comes the town island, with the Hull or Old Harbour on the east; the Old Dock on the north; and Junction Dock on the northwest; the Humber Dock and the new Railway Dock on the west; and the little Ferry-boat Dock on the south—one of the most curious interlacings of dock accommodation presented by any of our seaport towns.

The maritime associations of Hull have given to it many buildings and institutions of a peculiar character. The Guild of the Trinity House has existed at Hull for nearly five centuries. It was originally an association for religious purposes and mutual relief; but it gradually assumed a maritime character; and its successive charters at length defined its uses to be "the conservation and government of all mariners, and increase of the navies and seamen belonging to the town;" as also for the relief and support of poor marines and seamen, their widows and children. charters have confirmed to the Guild certain tolls or dues on the shipping of Hull, which have for many centuries been devoted to the various purposes of the Guild. Other estates and funds have gradually fallen into the hands of the Guild, and other controlling privileges over the general management of the port and seamen; the result of which has been that the Guild is now an important corporation, the consent of which is requisite for almost any and every improvement in the port or commerce of Hull.

The Trinity House itself, where the business of the Guild is transacted, is about a century old. It is a plain brick structure, consisting of buildings surrounding a spacious open court, with the usual naval emblems of Neptune, Britannia, and so forth, as adornments. The council-room, court-room, and other apartments, contain a few portraits and a few curiosities; but the chief part of this building is occupied by pensioners. There are many hospitals and almshouses in Hull, wholly for pilots or seamen, which are supported either by the Trinity Guild or by other bodies.

But above its docks and low-browed warehouses, we see rise the beautiful pinnacled tower of the church of "the Holy Trinity," built in 1312, and one of the largest in the kingdom. It is particularly worth a It is 270 feet by 100; the breadth of the nave is 172 feet. lofty and beautiful tower springs from the intersection. The transept is probably the oldest brick building (not Roman) in England. The chancel is in the decorated style, and was erected in 1270; the tower was built in 1312, and the nave, in the perpendicular style, in 1492. It has all the elements of a complete ecclesiastical structure; nave, aisles, chancel, and transepts. There is a noble central tower at the crossing of the nave and transepts. The east end, visible from the market-place, exhibits one of the finest and noblest windows which could be found even among our cathedrals. The light delicate perpendicular work of the western or nave portion; the fine tracery of the great window of the south transept; the rich decorations of the interior of the chancel; and the numerous interesting monuments placed in different parts of the building—all render this fine church worthy of admiration. It has lately been restored in some of its parts; but there is one little matter, which, though not very glaring, is rather too much so for the present taste in ecclesiastical architecture. The elaborate gates of the southern front, formed of cast-iron scroll work, are made to contain the names of two individuals. Now if these were the names of the original architects of the church, to whose genius we owe the majestic structure, it might be well enough; but when we find that they are the names of two townsmen who happened to be churchwardens some half dozen years ago, in the year probably when the repairs were finished, we cannot help thinking that vanity rather than good taste has been exhibited.

St. Mary's, the next best church in Hull, was originally as large and magnificent as Trinity, but it has been shorn of much of its splendour. The church is altogether small; and the only portion of it which possesses much interest is the venerable nave—once the chancel.

In the market place is a gilt statue of William III., and near the dock is a column erected in memory of Wilberforce, eighty feet high. There is a handsome town hall, baths and wash-houses, Trinity Guild Hous, museum and school, and charter house. At the grammar school, founded in the time of Richard III., Andrew Marvel and Wilberforce were educated.

The Queen and Prince Albert visited Hull in October, 1854, and obtained a very different reception from that which was vouchsafed to King Charles.

Leaving Hull and following the line still eastward, we enter upon the peninsula of Holderness, which is of a somewhat remarkable character. The outline of it has been oddly but not altogether incorrectly compared to "a boar's head, with the town of Patrington in its snout." A popular author thus describes this singular district.

"Its shores maintain a constant battle with the sea; in some places exhibiting traces of having been washed away by currents, sending the coast-line farther and farther inland; while in other places, sands and shoals indicate that dry land is superseding an expanse of water. One side of Holderness is washed by the German Ocean, and another by the Humber; and, as may reasonably be supposed, the washing away of the coast is exhibited principally on the former, and the shoaling on the latter. In a large map of Holderness, accompanying 'Poulson's History' of the district, it is curious to remark the catalogue of ravages made by the sea. At the north of the district, within the limits of the ocean, is marked 'Hartburn, washed away by the sea;' lower down is 'Hye, lost by the sea;' further south are two localities, both similarly beyond the limits of the land-'Site of the town of Hornsea Beck,' and 'Site of Hornsea Not far from there is the town of Aldborough, near the coast; and six or eight hundred yards out at sea, opposite the town, is the 'Site of the ancient church of Aldborough.' The coast at this part is washed at the rate of about four yards annually; and it is believed that a

whole string of sea-side villages has thus been destroyed during the lapse of ages. Farther south again, opposite the existing village of Withernsea, is the 'site of the ancient church,' about a third of a mile out to sea. On the southern margin of Holderness, nearly the whole distance from Spurn Point to Hull, there is a succession of shoals, which render the navigation of the river somewhat difficult.

"The Spurn Point here spoken of is a remarkable spot. It is an elongated strip of land which juts out southward across the very mouth of the Humber, as if it would bar the confluence of that river with the ocean, and there can be little doubt that the present course of the estuary of the Humber has been affected by this obstruction. It does not appear to be a very lofty, solid promontory; it is rather a low peninsula of gravel and sand, accumulated by the sea and wind, and laid in its peculiar form by the united action of currents from the sea and the Humber. It is instructive to observe how shattered fragments arrange themselves according to natural laws, and give a determinate character to different spots. The cliffs of Flamborough, Bridlington, and other parts of the coast, are being constantly washed down by the action of the sea, and the materials are sorted by the tide according to their weight and magnitude; the pebbles first, the sand farther south, and the fine impalpable mud near the mouth of the Humber. It is deemed not improbable that Spurn Point will, in some future age, be an island, by the washing away of the isthmus of pebbles and sand which joins it to the mainland westward of Spurn Point; in the broadest part of the Humber estuary is an extraordinary accumulation of sand, designated Sunk Island. It is in truth an island inhabited and cultivated; but it has been wholly gained from the river, by the deposit of sand and mud through a long series of ages. occasioned by a particular set of the tide at this point. It now presents about ten thousand acres of dry land, and is said to be increasing at the rate of about a hundred acres annually.

"The projection of this sandy peninsula into the mouth of the Humber

renders it a dangerous obstacle to shipping; and as early as the monat times, a day-signal and a night-light were set up on the Point. light-houses were built on Spurn Point in the reign of Charles I. were rebuilt by Smeaton, in the latter half of the last century; the 'high light' still remains, but the 'low light' has been so much exposed to the bit destructive action of the tide that it has been frequently rebuilt. Head, while proceeding to Spurn Point from Patrington, passed through Kilnsea, his account of which strikingly illustrates the tide-friction before spoken of:—'I thought I had never seen human dwellings so critically placed; the houses huddled together on a bleak bare spot, unrelieved by surrounding objects—a low promontory on a crumbling 'foundation' against which the waves continually beat with a heavy swell; indeed, the imagination can hardly depict a more abrupt and daring position. entering the village, and immediately contiguous, the road leading to it at one particular part had already gone; while, in a line diverging from the chasm, rails were set up to direct the course of the night traveller, and to prevent him from walking straighforward into the sea. It seems extraordinary that people can endure residence on so precarious a tenure; not that there is real danger to the inhabitant in keeping his post, for the cliffs yield at a regular progressive rate, affording sufficient warning of impending destruction; but because of the peculiarly melancholy reflection consequent upon living on any spot in the round world doomed to premature decay. Notwithstanding, hitherto such has been the apathy of the villagers, that many have rested quietly for weeks together, with the spray of the sea-storm rattling against their windows, and thus have remained till the ground has been almost torn from under their very beds.' At the present time the sea is actually eating its way through a churchyard, the surface of which is about thirty feet above the sea level; and the spoils which are thus gathered from the land, and strewed along the beach below, are of a somewhat ghastly nature."

After this general description it will be unnecessary to write at length

erning the towns on the route to Withernsea; we shall therefore, be

MARFLEET

he first, with less than 200 inhabitants; the birth-place of Andrew vel, the friend of Milton, an honest patriot and a fair poet. At

HEDON

re is an old Gothic church, and in the vicinity is Pag-hill Holme, re there is a tower of the date of 1234. A pack of hounds is kept at ton Constable, a short distance to the north. Hedon formerly rned members to Parliament, but was disfranchised by the Reform of 1832.

BURSTWICH-CUM-SKECKLING

nly noticeable for its Gothic church; whilst Keyningham, Oltring, and Winstead present no objects of interest except Winstead Hall, residence of H. Maister, Esq., at the last named.

PATRINGTON

little market town with an old cruciform church and spire. Here is ated the model farm, established by Messrs. Marshall, of Leeds. It is n this locality that the Holderness breed of cattle derived its celebrity relation in 1851, 1,830.

WITHERNSEA

s formerly described as "Withernsea, near Ewthern, on the coast of North Sea," but a wag proposed to alter the last part of the description to "in the North Sea," since the spot where the church of Withernwas, is now half a mile out in the sea. Beyond the town is Spurn Head, which James II. was wrecked on his way to Scotland, in 1682; every-

one except the Duke of Marlborough and the king's dogs and priests being lost. On the Head are the Spurn lights, one of which can be seen fiften—and some say twenty—miles out at sea.

SECTION VI.—SELBY TO MARKET WEIGHTON.

The traveller must now be supposed to retrace the rails to Selby, from whence we purpose to conduct him along

THE MARKET WEIGHTON LINE,

in a north-easterly direction, by Cliffe-common Gate, Duffield Gate, Menthorpe Gate, Bubwith, Foggathorpe Gate, Holme, and Harswell Gate. Selby has already been described [page 80]. Crossing the Ourse we enter upon a flat and "Lincolnshire looking" tract.

CLIFFE-COMMON GATE

Has no further interest than being the station for Lund, three-quarter of a mile distant; and Osgodley one mile from the station.

DUFFIELD GATE

In like manner, is only the station for South Duffield and Shipwith, two unimportant villages

MENTHORPE GATE

Is the station for North Duffield and Menthorpe, which is three-quarter of a mile off. This last named place had 71 residents in the township in 1851, and now it is said to have still fewer. A lively place Menthorpe, for any body fond of society! Beyond, we cross the Derwent and arrive at

BUBWITH.

Population 1851, 583. Here is a Gothic church, deriving its chief interest from Bishop Bubbewith, who was at the council of Constance.

Inghton which is two and a-half miles to the north or left of the line, known as the residence of Aske, of "Pilgrimage of Grace" notoriety, in reign of Henry VIII. Ellerton Priory is three miles off in the same rection, and East Cottingwith four and a-half miles.

FOGGATHORPE GATE

the station for Willythorpe, Gribthorpe, Spaldington, Hartlethorpe, Latham, and Aughton Ruddings, into which localities we have not been tempted to wander, and of which we cannot speak.

HOLME

Is the station for Holme Town, Holme Warren, Seaton Old Hall, and Seaton Ross. It was formerly the site of a beacon to guide the travellers across the marsh, which is now turned into hemp-fields.

HARSWELL GATE

Is the station for Everingham Hall, which is situated about a mile and a half to the north. Here W. C. Maxwell, Esq., author of the well-known "Stories of Waterloo," and other works, resides.

During the latter portion of the journey the Yorkshize Wolds will have grown more and more conspicuous; beneath them, where on the right of the line they rise to a height of 530 feet, is the fine, but quiet old town of

MARKET WEIGHTON.

The population in 1851 was 2,000, but it is not named in the *analysis* of the census of 1861. It has a good market for corn on Wednesdays; and fairs for horses and cattle on May 14, and September 25. Having conducted the traveller to this point, we propose to conduct him forwards along

SECTION VII.—YORK AND MARKET WEIGHTON LINE,

Which runs through a district once enjoying a tropical climate, and where, myriads of ages before man appeared upon the scene of creation, the

elephant, rhinocerous, and similar animals, roamed about in forests of which there are now no trace. The fossil remains of these huge creature have been found in the shell-marl hereabouts. The route is now in a curve at first north-west and afterwards south-east. Passing under the western slope of the Wolds, noticed in our general description of Yorkshire, the the traveller arrives at

SHIPTON,

Which is on the old Roman "Ermine Street." This is the station for Londesborough Hall, the seat of the well-known archeologist Lord Londesborough, appropriately situated on the site of the ancient Delgovitia. Shipton is half-way between York and Selby, and contained in 1851 but 416 persons in the township.

BURNBY

Is another unimportant station near which formerly stood a nunnery (Nunburnholme).

POCKLINGTON

Is celebrated on account of its having educated Wilberforce in its Grammar School. Population in 1851, 2550. Beyond is seen in succession, on the right, Kilnwick Priory, Millington, with its Roman antiquities, and Wilton Beacon, the highest point of the Wolds (809 feet.)

FANGFOSS

Is the station for Garrowby, the residence of Sir Charles Wood, Bart., and

STAMFORD BRIDGE

Is only interesting as being the spot on which Harold defeated the Northfust before his own defeat at Hastings. Here cakes are Harold's victory. į

1000

GATE HEMSLEY AND STOCKTON-ON-THE FOREST

Are solely interesting to the antiquarian, and little even to him. The Forest is in the coal strata for all one can see of it. At a short distance seyond Stockton, the railway runs over the little river Foss, and brings is once again to York.

We shall now retrace our journey to Hull, so as to complete our description of the lines in the Holderness district, and conduct the traveller along

SECTION VIII.-HULL TO SCARBOROUGH.

At a distance of about four miles, and nearly due north from Hull, is the village of

COTTINGHAM;

The population of which in 1851 was 2,854. In the church are some old monuments, but there are no other objects of interest. To the westward, up the Wolds, is Cottingham Castle; a building in the modern Gothic style, the seat of G. Coulson, Esq. It is built upon the site of an older building, known as Baynard Castle. Here in former times, used to be held a great pleasure fair. A little further on, and on the eastern side, is Burton Constable, an ancient mansion belonging to Sir T. Constable, Bart. A run of five miles then brings the train to

BEVERLEY.

This is another of those towns the condition of which is curiously illustrated by the census returns. In 1851 the district included in the Poor Law Union of Beverley contained 20,040 inhabitants; in 1861 it contained 21,029, or an increase of residents equal to 989; in the mean-time blowever, the excess of births over deaths in the same area was 2,623; so that no less than 1,634 of the natives had emigrated from the place of

their birth in ten years! This fact is evidence that the rate of wages must be low, and the town is not progressing. It is, nevertheless, a parliamentary borough, with two members; the inhabitants in the parliamentary limit being equal to about one half of those in the registrar's district. It is remarkable for its Minster, founded by St. John of Beverley, "who instigated King Athelstane to the building thereof." The general character of the building is early English; and as the minster has the advantage of being completely isulated, its beauty is easy observable. The general form of the exterior, to an uncritical eye, somewhat resembles that of Westminster Abbey, in so far as it is without a central tower, and has two square towers at the west front. The minster is cruciform, having the usual arrangement of nave, choir, and transepts. The west end is truly magnificent, and yields the palm to very few our cathedrals; indeed, Rickman says, that "the west front of this church is to the perpendicular what that of York is to the decorated style:" that is, its finest example. The porch is a richly recessed Gothic arch; and over it is a splendid window, surmounted by a richly panelled compartment, in front of which is the ornate canopy of the window. The corners of the entire front are occupied by the noble towers, which are distinct and complete compositions from the ground to the summit. There are two elaborately decorated buttresses on the west side, and two on the lateral side, of each tower; and between these buttresses there are four windows, two in each front, one above another. Above the level of these windows the tower contracts in dimensions, and is terminated by a series of pinnacles, more rich and varied, perhaps, than is presented by any of our cathedrals. The dimensions of the minster are as follow:—Length from east to west, 334 feet; breadth of nave and side aisles, 64 feet; length of the great cross aisle, or transept, 167 feet; height of the nave, 67 feet; height of the side aisles, 38 feet; height of the two west towers, 200 feet. The Percy screen, the curious portraits of the founders, and the old sanctuary are worth more than passing attention. In addition there are worth notice: the grammar school, the old north gate and market cross, the ancient church of St. Mary, and Beverley Hall. There are also in the vicinity the ruins of Meaux Abbey, the Norman church at Routh, the more modern church at South Skirlaw, and Dalton Hall, the property, and occasional residence of Lord Hotham. Leaving Beverley and passing through scenery of some beauty, we arrive at a distance of about five miles at

LOCKINGTON

This is a little village, with about 600 inhabitants, and possessing no interest except that derived from Walton Abbey, near which are the remains of a nunnery of the 12th century. This is the nearest station for Hornsea Mere, on the coast.

HUTTEN CRANSWICK

Is an unimportant station, three miles beyond. Population 1,189 in 1851. A little further on is Sunderlandwick, the residence of E. Raynard, Esq., and at a distance of about three miles we find

GREAT DRIFFIELD,

Where the line branches off north-easterly to Bridlington, Filey, and Scarborough; and north-westerly to Malton and Pilmoor Junction on the main line between York and Thirsk.

We shall first follow the line through to Bridlington and Scarborough, and afterwards trace the other branch to Pilmoor Junction. But first a word or two on Great Driffield, which is an exceedingly pretty rural town, connected by canal with the river Hull, and lying under the Wolds. The population residing within the limits of the Poor Law Union, in 1851 were 18,265; and in 1861 there were 19,223, showing an increase of only 958 in the decennial; the births exceeding the deaths to the number of 2,923; so that there must have been a migration of the natives to the number of 1,965, which would be equal to more than one tenth of the inhabitants, or one person from every second family! Great Driffield is

not progressing very fast. The population of the town itself in 1851 where: 3800. There is an old church and some curious monuments, but the p Wolds deserve the most attention. They may be noted stretching superito the eastward, where they end, at Flamborough Head, in cliffs of childred between 300 and 400 feet high. At their foot lies the plain upon white Great (?) Driffield stands, and which is continued to the sea. This was formerly a marsh, but is now drained by canals. Along this plain and as beneath the shadow of the Wolds, the train now conveys the traveller to a

NAFFERTON,

Which is the station for Wansford, Foston, and Nafferton Grange. In 1851 there were 1,260 residents in the township. Linen and rope are made here; the former occupation is said to be declining. On the Wolds in the vicinity are tumuli at Danesdale and Danes Graves, where there are 200 barrows. The Grange is about a mile and a half distant. Rather more than two miles further is Lowthorpe Hall, and then

BURTON AGNES.

Which is twenty-five and a-half miles from Hull, and twenty-eight from Whitby—nearly half way. In 1851 there were only 345 persons in the township. On the side of the Wolds, however, is Sir H. Boynton's residence, Burton Agnes Hall, a building designed by Inigo Jones, and a good specimen of his style. At Kilham, three miles off, is a curious old church, partly Norman. Soon after leaving the station, the tourist will catch a view of Auburn on the right, where the cliff begins; the base has been washed away by the sea. To the south is Barmston, formerly occupied by the Boynton family. Proceeding onwards we pass Carnaby, where on the left is Boynton Hall, where Sir G. Strickland resides.

BRIDLINGTON

Is about thirty-one miles from Hull, and twenty-three from Scarborough.

The town is about half a mile from the station. Its name, which was

merly written Brellington, is prononced "Burlington." It is situate a pretty valley, through which flows a stream to which some graceful perstitions are attached, and which is called "the gipsy race." The **Poor Law Union contains 63,410 acres with thirty-two parishes and** was 14,322; in 1861 it had only Increased to 14,371; so that, as the births in the decennial were 1805 more than the deaths, no less than 1,756 must have left their native place and gone to seek a living elsewhere! The town is about a mile from the east coast, where is situate the modern town of Bridlington Quay; a bathing place which has grown up during the last ten years. Indeed, the Quay has the whole life of the district of Bridlington in the summer time. It has a fine street and two substantial piers; from which a very good view of Flamborough Head is obtained. The beach has a fine hard sand, well adapted for a promenade at low water. In addition to these attractions, which are far beyond those of many more fashionable bathing places, there is a chalybeate spring in the immediate vicinage; fossiliferous cliffs for the geologist, and an ebbing and flowing spring of beautiful fresh water for the delectation of the marvellous. Very commodious boats lie at anchorage in the Bay, and a constant source of amusement will be presented to those who, with a telescope, can mount the cliffs, from whence may be seen occasionally the steamers running between London and the northern ports. The shops of "old" Bridlington are sufficiently near to supplement any wants not supplied by the more energetic tradespeople of the watering place. There, too, the antiquarian will find many objects of interest, within a brief saunter of his "lodgings with a sea view." The district around Bridlington was the stronghold of the Danes for many The "Danes Tower", near Flamborough, is however, of Norman architecture. From the tumuli round about, on the Wolds, have been taken skeletons, coins, and a few British coins. A monastery of the Augustines existed at Bridlington for four centuries. Here, among other legends is a true story of the celebrated Paul Jones, who captured two

ships in the bay in 1779. The priory church is one of the chief featured of the town; "the grand western entrance being an exquisite special of the architecture of the time of Henry VII., except the northway tower, which belongs to a later period." An excellent descriptive according to the church, written by the Rev. M. Pritchett can be purchased in the town, or can be consulted at any of the leading hotels. In the church a monument to a person who died at the reputed age of 153. The pastoration which has been recently carried out, is executed with grant taste. There are two subscription libraries, a small museum, and the mechanics' institution: so that the visitor need not be dull or uninstructed Leaving the esplanade at Bridlington Quay with regret, we once more return to the rails and steam towards Scarborough. The first station is

MARTON,

Which is four miles from Flamborough Head; and is the station for Sowerby House.

BEMPTON AND HUNMANBY

Are also unimportant places, being remarkable only as the point of termination of the chalk cliffs. This stratum is succeeded by the lias and alum shale. Less than three miles beyond lies the town of

FILEY,

Near Filey Bay, a pleasant watering place. The population in 1851 was 1,511, of which the males formed the larger half: this, perhaps, was a solitary case in England. At Gristhorpe, not far from Filey, a tumulus was opened in 1834, and there was found in it some very remarkable human remains. "The coffin was of oak, and of the rudest shape and structure;" the interior having been hollowed out apparently with flint chisels and hatchets. The body was enveloped in a strong skin. Flint heads of arrows and of a javelin, pins of horn, bone, and wood, and the "agments of a horn ring were among the contents of the coffin. A spear

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and of brass or bronze was also found. The coffin and its contents were cared in the Scarborough museum.

GRISTHORPE AND CAYTON

Present no attractions, and two miles beyond the latter we arrive at

SEAMER JUNCTION,

Where the York line joins the Hull route. Three miles beyond is the harming watering place of

SCARBOROUGH,

Fifty-three and a-half miles from Hull, a market town, a seaport, and a municipal and parliamentary borough. We have now passed into the North Riding of Yorkshire; in which the Scarborough Union is the largest Poor Law district. Its inhabitants in 1851 were 24,615, and in 1861, 30,424. The excess of births over deaths, would only account for an increase of 3,410; so that there must have been in the decenniad an immigration of new settlers amounting to 1,999. Scarborough is therefore growing rapidly. Its name signifies "fortified rock," and that it was of Saxon origin.

Scarborough is beautifully situated on the declivity of a high, steep rock, in the recess of a fine, open bay on the north sea. It consists of numerous streets, lighted with gas, rising in successive tiers from the shore, in the form of an amphitheatre, and contains several elegant terraces, crescents, and isolated mansions. It has a town hall, custom house, jail, assembly room, and theatre; several established churches, and places of worship for other denominations; a grammar, Lancasterian, national, and various other schools; several hospitals, and a sea-bathing infirmary for poor invalids, supported by voluntary contribution; a museum of geology and natural history, a mechanic's institute, two public libraries, and a philosophical society. There are various handsome shops through-

out the town, amongst which—the most noticable, as characteristic in the district—are several elegant establishments where articles of jet many piece facture find a ready sale during the fashionable season. Rising from the shore, the prospect is at once boundless, rich, and varied. The scenarious is exceedingly striking, and no stranger of taste, visiting it for the find how time, and who has sojourned but a single day at this "Queen of English that Watering Places," can fail to be enchanted with its varied attractions.

The first object which strikes the tourist on approaching the town, from whatever quarter, is the ruins of its celebrated castle, whose riven from stands in bold and striking outline against the sky. It was built in the reign of Stephen, about the year 1136, by William de Gros, Earl of Abemark and Holderness. The lofty promontory on which the venerable ruin of the ancient castle stands is bounded on three sides by the ocean, and rises more than 300 feet above the level of the sea. An old writer, William of Newbury, says of it, in his day:—"The approach to the castle is by the gateway, on the summit of a narrow isthmus, on the western side, above the town. The drawbridge is a short distance within the gate, and under it is a deep and perpendicular fosse, which continues southward along the foot of the western declivity along the whole length of the line of the wall. Within the drawbridge, on the right, is a part of the wall of the ballium. to which there is a little acclivity; and here rises a stately tower, majestic even in its ruins." This tower, which has been the keep, is a very lofty. square, Norman building, 97 feet high, and has formerly had an embattled parapet, which, in its original state, cannot have been less then 120 feet in height.

Leaving the ruins, and pursuing our way to the top of the castle grounds, there is a pleasant plain, grassy and spacious, of about eighteen acres, where rifle butts have been erected, and practice was going on at the period of our visit, which was the only drawback to the full enjoyat of this exquisite panorama. The barracks are quite modern; they built by the Duke of Montague in 1746, and will contain 120 soldiers

twelve apartments. On the south point of the castle-yard, upon a rojecting plain, some distance below its summit, facing the bay and wen, at a convenient height above the level of the sea, a battery, called South Steel, was at the same time erected, and ten guns placed thereon. A covered way descending from the castle-yard by a flight of steps leads down to this battery, which is the principal defence of the town to the **south, and from its favoured position, is in some degree formidable.** From few parts of the town has the visitor a finer and more varied prospect than from the castle. Let him climb, either at his entrance through the gateway, or on his return, some steps which will conduct him to a wall adjoining the barbican, and a prospect will be opened out to him, surpassed by few. To the west the country stretches out in all the variety of hill and dale, the hills raising their forms in bold relief against the sky, and the latter exhibiting the richness of a well wooded and cultivated country. At his feet the town spreads itself; in the distance, the sands, the bridge, and the esplanade are covered with youth, beauty, and fashion -all seeking health or renewed enjoyment; whilst "Old Ocean," to augment the pleasure, rolling his billows, and uttering his everlasting murmurs, presents a picture which may be equalled, but is seldom surpassed. But

"Scarborough boasts
A triple portion of the healing strength,
In her famed Spa,"

which is situated at the base of South Cliff, and consists of two springs, called North and South Wells; the former of these is chalybeate, and the latter saline. From both wells the water is perfectly clear, of a blueish cast; has not a very disagreeable taste, nor the least smell. The spa is in the hands of a company, who have done much to render it attractive. The old spa was erected in the year 1739, but in 1836 was entirely destroyed by a severe gale of wind, and an unusually high tide. After considerable delay, the present elegant structure was raised, the grounds

enlarged, and many portions of the surrounding cliffs tastefully laid in walks and shrubberies, interspersed with ornamental, rustic, and Swi seats, and summer-houses, at an outlay of several thousand pound While nature has done so much for this charming locality, art has been busy in every device to add to the pleasures and to promote the comfat and convenience of the thousands who daily throng the lovely walk and terraces of the Spa grounds. The saloon or Gothic Hall was built in 1837, from designs furnished by Henry Wyatt, Esq. The building is in the castellated style, and is much admired for its chaste and elegant appearance. There is one principal room or saloon, 76ft. long by 17ft. broad; which, during the season, is frequently used as a concert room. In 1846 the saloon was considerably enlarged, to give more accommodation, and an excellent sea-wall was erected at a great expense; and again extended considerably to the south in the year 1858. The new saloun occupies a position at the south end of the old building, and is approached from the north end by a broad colonnade, 188ft. long, formed with a corrugated roof, supported on ornamental iron columns and brackets. The site of the building involved the extension of the sea-wall, by which an esplanade has been formed, which is now the most beautiful promenade any place in England can boast of. The plan of the building externally is that of a parallelogram, with projections at the angles, to break the outlines. The sides towards the sea, and the south end, are surrounded by a colonnade, which is raised so as to form a terrace four feet above the ground line of the esplanade; it is approached by a flight of stone steps, running the entire length of the new and old buildings, and the colonnade at the north end. This colonnade forms a promenade at the gallery level about 320 feet in length, and is supported on cast iron columns and ornamental brackets, which also serve the purpose of gas illuminators; · columns are hollow, and are made to conduct the water from the roof.

columns are hollow, and are made to conduct the water from the roof.

orincipal façade is simple in design, but characteristic of the pur
which the building is appropriated. The architectural and

artistic beauties of the Spa saloon form one of the chief attractions which Scarborough possesses.

The Oddfellows' Hall at Scarborough, the Trinity Hospital, Wilson's Marine Asylum, &c., are handsome buildings. The Town Hall Assembly Rooms, and Theatre are also commodious and elegant. The Cliff Bridge, erected on piers seventy-five feet high, over a chasm 400 feet wide, is a remarkable object, and forms a charming promenade. Scarborough is 233 miles from London, but the journey can be pleasantly divided at York, or subdivided at Peterborough.

Returning now to the junction at Great Driffield, we trace the line to the north-west, through Malton, to the junction with the main line at Pilmoor.

We have already written of GREAT DRIFFIELD and merely name it again to enable the reader to find the point of resumption of the route from Hull to Malton and Pilmoor, and so to Thirsk, and the North.

WETWANG, FIMBER, BURDALE, & NORTH GRIMSTON,

Are not remarkable for anything, except being situated in the hunting district of Sir Tatton Sykes,—"a fine Old English Gentleman." Just beyond, we cross the river Derwent, and arrive at

OLD MALTON,

A town well known in sporting circles. Together with New Malton,—which is a well built town, it forms the "pocket borough" of Earl Fitz-william. There is a good Town Hall, and some remains of a Norman Castle. At this point, the line from York to Scarborough and Whitby, crosses our route, and here the passenger from Hull must change for those places.

AMOTHERBY AND BARTON-LE-STREET,

Are unimportant. The Cleveland Moors are seen to the right; the highest point is Ralph's Cross, 1864 feet above the sea. To the left is Castle Howard, the seat of the Earl of Carlisle.

HOVINGHAM,

Is only noticeable from its proximity to Kirkby Moorside, where troyal rake George Villiers, Duke of Buckingham died in desaway, obscurity.

GILLING,

In like manner is mentioned only as being the station for Helmsley and Duncombe House, the latter being the seat of Lord Feversham, and remarkable for its pictures, marble, and architecture. The ruins of Rivauk Abbey are in a sweet spot in the neighbourhood, and worthy of a pilgrimage. Passing Ampleforth, Newburgh is seen on the left, and further on Craiks Castle, once a royal residence.

COXWOLD

Is 38 miles from Driffield and but six from Pilmoor. It is the station for Byland Abbey, and conveyances may be had also to Rivaulx Abbey, which is six miles distant. Thormanby, from which the celebrated racer took his name, is 3½ miles hence.

PILMOOR.

Will be described in connection with the main line to the North.

We shall now return to York and trace the line from that ancient city to Scarborough and Whitby.

SECTION X.-YORK TO SCARBOROUGH AND WHITBY.

From the Old Cathedral City, with its beautiful minster, we enter at first upon a country of comparatively uninteresting character, but in which the highest culture may everywhere be traced. Passing out of the town, and following the course of the Foss the line crosses that from Market Weighton

Haxby, a little township with about 600 inhabitants, to Strensall, ich on the left is Sutton Hall. Here was formerly an immense

st, all traces of which have disappeared. Near Flaxton, on the left be seen the tower of the Castle in which Richard III. confined abeth of York, Queen of Henry VII. Near Barton-le-Willows, her unimportant place, the rail crosses the Derwent, which forms the dary between the North and East Ridings.

KIRKHAM,

ne station for Kirkham Abbey, whose ruins were made more ruinous, he cartage of the stones to erect Howsham Hall.

CASTLE HOWARD

ion is $2\frac{1}{2}$ miles from the Castle itself which is well worthy of a visit. one of Vanbrugh's finest works, 600 feet long; and was erected by les, third Earl of Carlisle, on the spot of the old castle of Hinder-. There are some very fine paintings; amongst which is to be seen elebrated painting of "The Three Marys;" and a piece of statuary gift of Lord Nelson. In 1850 Queen Victoria visited this beautiful and planted a tree as a memorial of her sojourn.

eyond HUTTON we cross the Derwent and pass Malton, already red to, where the line from Driffield to Pilmoor runs almost at right es to Rillington where the line branches to Scarborough on the one l, and to Whitby on the other. We shall travel along the line from

RILLINGTON TO SCARBOROUGH

ining less than 1000 inhabitants. Passing Heslerton we arrive at aburn, six and a-half miles from Rillington, and Ganton three miles er. In doing so we leave Ganton Hall on the right. On the opposite of the Derwent is Wykeham Abbey with some interesting ruins, dating as far as 1153, near at hand. At Seamer the Bridlington lines its junction, but the place itself is of little importance, This brings

us once again to Scarborough, already described. We now resume that P journey at Rillington Junction, and passing Scampston, cross the During estatement into the North Riding, and leaving Marishes Road, we enter up hery the vale of

PICKERING,

Where the moorlands commence. The place is a quiet market town, the centre of a Poor Law Union; the population of which was in 1851, 9,970 and in 1861, 10,547; so that, although the births exceeded the deaths 1,353, the resident population only increased 569. A bad sign of the progress of Pickering! The objects of interest are the old church, at the ruins of the castle, in which Richard II. was confined. Following the course of Pickering Beck, as it winds through the Cleveland Moors, we are carried through scenery of the most picturesque description. On the left Shunnor Hoe rises 1404 feet, Ralph's Cross 1844 feet, and Bolton Head 1,485 feet in height. This part of the line was formerly worked with horses. Passing Newton on the left, we arrive at

LEVISHAM,

Which is situate near the valley of Rosedale. It is the station for those who wish to ascend Ralph's Cross. Leaving Gothland and Gessmont, and an exquisite spot called Sleights, we come to Ruswarp, and so by the suspension bridge over the river to

WHITBY;

A bathing place and borough town on the sea coast. The river Esk flows through it. The population of the Superintendent Registrars' district of Whitby was, in 1851, 21,592; in 1861 it was 22,634; during the decennial the excess of births over deaths was 3,212, so that Whitby rending backwards, 1,160 of the natives having sought employment here. It returns one member to Parliament. The alum which is a the lias strata, which compose the cliffs, finds partial employment

he people, who seem to have a greater opinion of them because they established in 1615. On the east cliff stand the ruins of St. Hilda's y, 300 feet above the sea. It was founded by Oswy, King of Noriberland, in 658, but abbey and town were destroyed by the Danes in and lay in ruins till after the conquest, when the abbey was rebuilt, the town became a fishing port. The central tower of the priory fell 30, but the ruins are still very beautiful. The better part of the stands on the left bank of the river, over which there is a bridge of arches, 172 feet long, with a swing bridge in the centre to allow ls to pass to the inner harbour; this is capacious and secure with dry The piers which protect the outside harbour run out a considerdistance into the sea, the western forming a fine promenade 1,000 ong. At the end of it is a lighthouse. Among the buildings are 'own Hall, Custom House, an elegant bath-house on the Quay (cong subscription library and Museum.) The parish church is very resquely situate on the summit of the cliff, 350 feet high. tecture is "of many ages." The neighbourhood is rich in fossils; an specimen of the Plesiosaurus Grandipinnis, 15 feet 6 inches long, found in the lias in 1841. This renders the museum especially sting to the geologist. The beach, which lies under the cliffs, is miles long. At a distance of about a mile is Whithy Abbey; not f are Robin Hood's butts, and the spot is shown where the bold w's arrow fell when he shot before the Abbot of Whitby. is Robin Hood's Bay. North of the town is Mulgrave Castle, and it the remains of a Saxon fortress.

e shall now, in imagination, return to

LEEDS;

e we left the traveller, after journeying with him from Milford ion, and we shall trace the line directly north between

SECTION X.-LEEDS TO THIRSK

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Via Harrogate and Ripon; leaving Wellington station we arrive at

HEDINGLEY,

A suburb of Leeds. It contains 6,105 inhabitants in the township the Here are the Botanical Gardens, and also the oak which gives the new of Skeyrack to the Wapentake. Kirkstall Abbey is a beautiful recovered with ivy, and can be seen from the line. It it situated on the river Aire, and was founded by the Lacys in the 12th century. It is work a special visit. Kirkstall Grange is near and contains some fine picture.

ARTHINGTON

Is nine and a quarter miles from Leeds, and is the station for

OTLEY;

A town containing in 1851, 28,541 inhabitants; in 1861, 29,508. The church is full of interesting monuments. Bolton Abbey lies beyond. Not far from the station is the splendid seat of the Earl of Harewood. Crossing the river Wharfe, we arrive at Weeton and Pannal, two unimportant places. Spofforth, a deserted seat of the Percy family, lies on the east of the line. Beyond is Starbeck, the station for

HARROGATE,

The fashionable inland watering place of the northern counties, and known throughout the civilised world as the resort of wealthy and aristocratic invalids. It is twenty miles from York, fifteen from Leeds, nearly half way between the North Sea and the Irish Channel, and about 200 miles from each of the capitals of the three kingdoms—London, Edinburgh, and Dublin. The population in 1851 was 4,262; in 1861 it had increased to 5,567; of which the ladies' share was 3,080. The town is entirely modern, and owes its fame to its medicinal springs. It is admirably situated on a slope, and from the higher portions of the town a delightful views are obtained of the surrounding country. The

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mineral springs are of different qualities, sulphurous, chalybeate, and name aperient. The first in the order of discovery is Tewit Well, whose waters were made known to the world about the year 1580, when many of the high and noble coming to drink thereof, went home cured of their maladies; among them the Countess of Buckingham, daughter of General Fairfax. In 1631 John's Well, or the Sweet Spa, was discovered, and about the same period was established the Old Sulphur Wells in Low Harrogate; and the Starbeck Springs near the Starbeck railway station. There are now two strong sulphur wells or springs, seventeen mild sulphur, three saline chalybeate, and four pure chalybeate available to the public, besides five or six public bathing establishments. Amongst the public buildings are the Royal Cheltenham Promenade and Pump Room—the largest and most elegant public room in the town—the Royal Pump Room, the Bath Hospital for the benefit of poor invalids, and the Mechanics' Institute. There are three churches; and chapels belonging to the Wesleyans, Independents, Methodist Free Church, Primitive Methodists, and the Society of Friends, and six public schools. Harlow Hill, an eminence, not quite a mile to the west, is surmounted by a tower whose summit is 690 feet above the sea level. Standing here on a fine day "the course and confluence of nearly all the great Yorkshire rivers lie within the limits of the vision. Two cities, York and Ripon, with their cathedrals are distinctly visible, and at times Lincoln is seen on the distant horizon like a small dark cloud. Seven of the great battle fields of England, and the scenes of at least twenty minor skirmishes may be seen from hence; twenty market towns; seventeen castles; twenty-three ancient abbeys and other religous houses; more than seventy seats of the nobility and gentry; and nearly two hundred parish churches." town is lighted with gas, and supplied with water by public companies. The season commences in May, and continues till September; and the amusements consist chiefly of reading, walking, excursions to remarkable places in the neighbourhood, and attending concerts and balls.

The parks, and footpaths in the fields around afford many pleasant

walks; and pedestrian excursions are frequently made to Harlow H Harlow Carr, Birk Crag, Pannal, Crimple Viaduct, Bilton, &c. Long excursions by carriages or railway can be made to the following places:

Knaresborough . 3	miles distant,	can be	seen	daily.
Plumpton 3	"	"	,,	"
Ribston 5	,,	,,	,,	on Tuesdays.
Cowthorpe 5	"	,,	"	daily.
Harewood 8	,,	,,	,,	on Thursdays.
Kirkstall Abbey. 15	"	,,	"	daily.
Bolton Priory . 16	"	"	,,	,,
Brimham Rocks. 11	"	,,	"	"
Ripley 4	,	,,	,,	on Fridays.
Studley Park Fountns. Abbey } 14		,,	,,	daily.
Ripon 11	"	"	,,	**
Hackfall 18	,,	"	,,	"
$\left. \begin{array}{c} \textbf{Aldborough} \\ \textbf{Boro' Bridge.} \end{array} \right\} 10$	"	,, .,	· - ->,	"

It is easy for the visitor to extend his rambles along the valleys the Wharfe and the Nidd, which abound in fine scenery, to York : the castles and abbeys surrounding that ancient city.

Crossing the Nidd from the Starbeck station, we presently arrive a

RIPLEY,

An unimportant place, save for the castle belonging to the Ingilby fam and occupied by them since 1555. The moors on the west are 2,265 high at Great Whernside.

WORMALD GREEN.

chiefly for the property of Earl de Grey and Ripon-Ne

RIPON, 103

Hall—which is three and a half miles off. It is a building by Wren, and contains a fine sculpture gallery, in which is the Barberina Venus, some fine inlaid marbles, and a room decorated with Gobelin tapestry. It is specially worthy of a visit, and the Earl affords every reasonable facility to strangers who will take the trouble to show they are respectable, and in search of the beautiful. Crossing the river Ure, we arrive, at a distance of about five miles, at the ancient and picturesque town of

RIPON,



RIPON CATHEDRAL,

The "deadly liveliness" of the town and locality may be imagined from the fact that its population had decreased from 16,041 in 1851, to 15,742 in 1861, showing that though the births had exceeded the deaths by 1,939



FOUNTAIN'S ABBEY.

in 1132, by Thrustan, Archbishop of York, and it gradually increased in riches and power, during a period of 400 years, until the dissolution of Monasteries by our English Bluebeard, in 1539. The situation of the Abbey is the very incarnation of beauty, and the scene from the great east window, fifty-two feet high, is one on which the eye delights to linger, the absence of its once airy tracery being kindly supplied by Nature, which has gracefully festooned its mouldering arch with the gleaming blue of the Canterbury bell, of a size and beauty seldom seen. The northern side of the lawn in front is hemmed in by a precipitous rampart of primeval rock, overhung by the waving branches of hoary trees,

"Whispering their tales of former years;"

while on the other side the Skeld flows under a portion of the ruins,

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and falls in a sparkling cascade at the end of the lawn, once probably Abbey garden.

The visitor will be particularly struck with the magnificence magnitude of the ruins, and the impression produced by a first view the nave through the west door is peculiarly solemn as the eye dwells a chastened pleasure on the graceful pointed arcades, resting on t massive, but shapely columns, and travels thence to the east wind now denuded of its stone tracery, but still a magnificent example of perpendicular style. After wandering through the shade of the clois we emerge into the sunlight of the cloister court, then find our wa the great tower, which shoots up its roofless walls to the height of feet; and anon we find ourselves in the kitchen, inspecting the mamn culinary arrangements of the long departed Fathers, who, however m they attended to their spiritual wants, seem to have kindly nourished physical man also.

MELMERBY JUNCTION

Is a point at which the line divides, one portion of it going by Melme (North Conyers), Sinderby (for Middleham Castle, Jervaulx Abbey), Newby Wiske to Northallerton on the main line. Passing Balder Gate and Topcliffe Gate we arrive at

THIRSK, ON THE MAIN LINE,

Which is described in the route between York and Darlington.

We now propose once more to retrace our journey to Church Fen Junction, on the line between Milford and York, and to note the obj of interest on the line known as

SMOTION XII.-THE HARROGATE BRANCH.

WYON, which has already been referred to in the journey fi York, is the station for Cawood, and the point of commen ment of the Harrogate Branch of the North Eastern Railway. It is distant from Harrogate sixteen miles by rail; thirteen and three-quarters from Normanton, and ten and three-quarters from York. The line turns off to the westward. At Cawood are the remains of the splendid bishop's palace where Wolsey was arrested. There is a pleasant drive through to Selby, which lies four miles beyond.

of Lord Hawke. Further on we pass Towron, celebrated for the battle gained by the Yorkists in 1461. Sturron is the station for Lord Londesborough's seat—Grimston Park—where there is a collection of rare antiquities. A note addressed to his Lordship's steward requesting permission to inspect the museum is sure to receive courteous attention. Not far from thence is Hazlewood Hall, the ancient seat of the Vavasours.

TADCASTER,

Is about a mile and a half from the station, which is the place of departure also for Bramham Park, the residence of G. L. Fox, Esq. Tadcaster is beautifully situated on the banks of the Wharfe, over which there is a long bridge, the length of which is to provide against the sudden floods, which are said to rush down Wharfedale. The place is quiet to a degree, and is apparently declining. The census in 1851, showed the inhabitants to be 19,710, and in 1861 19,919, so that as the births had added 2,317 to the population, 2,108 of the natives must have emigrated. This is a serious matter for Tadcaster. The town is of the 14th Century. As in all decaying places there are several endowed charities. The limestone of which York Minster was built, was brought from hence. Passing Newton Kyme we arrive at a lovely spot known as

THORP ARCH

And Boston Spa. The village itself is small. The arched bridge which spans the Wharfe, near a fall in the river gives its name to the place. The Spa is a mineral water discovered in 1744, and, we think, not sufficiently

appreciated. We cannot imagine why this exquisite neighbourhood has not been more appreciated by invalids in search of repose and beautiful scenery. With Goldsmith under one's arm, an intelligent friend and sunny day, commend us to the walks east and west from Thorpe Arch, with bread and butter, eggs and milk, at the hospitable farms by the road sides. About two miles and a-half further along the line we arrive at

WETHERBY,

The station for Kirk-Deighton, Colthorpe, and Collingham. Kirk-by-Linton is four miles, and Harewood Hall seven miles distant. The town is in a lovely situation on the Wharfe, which is crossed by a handsome bridge, near an old Roman Ford. The town originally belonged to the Knights Templars; and was garrisoned by Fairfax in 1642. We predict that at some time or other, Wetherby will become a fashionable spot for retirement. Three miles further along the line is

SPOFFORTH,

Where the remains of the old seat of the Percys is to be seen. It dates from the early part of the 14th century, and was reduced to ruins after the battle of Towton just referred to. We now cross the Leeds and Thirsk line, near Rudding Park and Starbeck Junction, and two miles further on is HARROGATE, already noticed.

We shall now trace the line between Harrogate and York, vist Knaresborough and Marston, formerly known as the East and West Yorkshire line, but now recognised as the

YORK, KNARESBOROUGH, AND HIGH HARROGATE,

runs through Knaresborough, Allerton, Cattal, Hammerton, Marand Poppleton; though most of these are omitted from the

KNARESBOROUGH

is another beautiful spot. It is situated on the river Nidd; above which the cliffs rise abruptly to a height of 100 feet. The population of the parliamentary borough in 1851 was 5,536, the electors returning two The census district in 1851 contained, with = members to parliament. Great Ouseburn and Wetherby, 32,769; whilst in 1861 there were 33,831, though the excess of births over deaths in the same period was Knaresborough, therefore, has been declining. The town is **3**,256. well built and lighted. In the Gothic church are some noticeable monuments; and on a rocky height between the two bridges are the ruins of the Norman castle built by Scrls de Burgh, and dismantled by parlia-Half a mile down the river are interesting ruins of a ment in 1648. On the opposite bank to the castle is the celebrated dropping well which is said to convert birds nests, &c., suspended therein into stone; the fact being that the water deposits a coating of calcereous matter on the outside, and in the interstices of such substances. Near to it are some curious excavations, which are notorious in connexion with the story of Eugene Aram, whose crime and history has formed the subject of one of the most beautiful romances in the English language, by Sir Bulwer Lytton. The corn market of Knaresborough is a very good one, and manufactures are springing up in the vicinity. It is a charming place for the tourist, and is within a pleasant distance of Harrogate.

GOLDSBOROUGH

Station is a mile from Goldsborough Hall belonging to the Earl of Harewood. On the south or right of the line is Ribston Hall, where the celebrated seedling the "Ribston pippin" was first cultivated. Allerton, CATTAL, and HAMERTON are not specially interesting; beyond this last we cross the Nidd by a viaduct for

MARSTON

Where the famous battle of Marston Moor was fought in 1644, between Prince Rupert and Cromwell. The affair forms the subject of Mr. Henry Vincent's finest efforts in oratory, in his lectures on the Commonwealth. The township in 1851 contained only 421 inhabitants. Hessay and Poppleton are unimportant places. Beyond is a Tudor arch, seventy feet wide, formed in the old walls of the city of York, to which we have now conducted the tourist—and a description of which is given on a previous page.

Having gone over the branches cast and west of York, as far as Scarborough and Whitby on the east; and Leeds, Harrogate, and Ripon, on the west: we now take our seats, in imagination, and proceed along

THE MAIN LINE NORTH

FROM YORK TO NEWCASTLE;

Leaving the branches to Stockton, Stokesley, Hartlepool, Bishop Auckland, Sunderland, and South Shields for subsequent description.

Leaving York behind us, the line runs near the banks of the Ouse, and crosses it by a stone viaduct of three arches, thirty feet high, to Shipton, a small township, with about 500 inhabitants, near which is Benningborough Hall, the seat of the Hon. P. Dawnay.

TOLLERTON,

Is nine and three-quarter miles from York, and is chiefly noticeable as being in the vicinity of Sutton, where was the vicarage of Lawrence Sterne, the author of "Tristram Shandy," the "Sentimental Journey," the "History of a Watch-coat;" and some less celebrated sermons. Sutton has a curious w of the satirical parson. Passing Alne, we arrive at RASKELF, "he east, may be seen Easingwold, on a slope of the moorlands. Craike Castle, where the body of St. Cuthbert—said to have

been miraculously preserved—rested on their transit to Durham. That legend will be referred to hereafter. The next station is

PILMOOR JUNCTION;

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Already described in connection with the line from Great Driffield and Malton. It is the junction for Northallerton on the east, and on the west for

BOROUGH BRIDGE.

This was, before 1832, a borough sending two members to parliament. Its population in 1851 was about 1,000. The "Devil's Arrows" are some interesting Druidcal remains near the bridge over the Ure. Aldborough, another rotten borough is close at hand, and is chiefly celebrated as having given the title to the Earl whose reputation is associated with Holloway's pills. Borough Bridge is five and three-quarters miles from the station. Two miles from Pilmoor Junction is Sessay, chiefly noticeable as the station for Hutton Sessay, Thirkleby and Elmer. Newby Park, formerly the seat of George Hudson, Esq., "the railway king," is three miles distant. Passing over Codbeck Viaduct, we arrive at

THIRSK STATION,

The point of junction with the Leeds and Ripon line. The town itself is about a mile and a-quarter from the station. Ripon is ten miles from this point by rail. Thirsk is situated on the Codbeck, on the east of the main line. It is embossomed in the hills, and has many picturesque attractions, but is unable to find employment for its residents, as is proved by the fact that its population is absolutely decreasing. In 1851 its inhabitants were 12,760; in 1861, 12,299. The excess of births over deaths in the decennial was 1,525; showing that no less than 1,986 persons must have left the place in ten years. It returns one member to parliament. The ancient church was built with the stones of Mowbray's castle, the site of which is to the south-west, demolished by Henry II. To the east

to Through Advert in the moons of Chevenand, which are 1,800 feet in Through the at excellent provision market and is well entired in managed to manufactures such a silicativity make making, for the moon which are the sound to the moon of Through and Through an Through the transfer of the moon of the moon

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Sockburn Hall, where the owners present each new Bishop of Durham with the identical falchion with which some forgotten imitator of St. George slew a "fiery flying serpent." Crossing the river Tees by a very fine skew viaduct, consisting of five stone arches, fifty feet high, we pass into the county of Durham. The little township of Croft is of no importance; though its attractions are manifold. The sulphur springs and surrounding scenery deserve the attention of capitalists and invalids.

THE COUNTY OF DURHAM

May here be appropriately the subject of a general notice before we pass on to describe Darlington, and the other towns en route. The area of the county is 973 square miles. Its population in 1851 was 390,997, residing in 64,977 houses. The proportion of the sexes being in the unusual rates of 196,700 males to 194,297 females: in 1861 the total inhabitants were 509,018, residing in 84,877 houses, the relation of the sexes being 258,343 males to 250,675 females.

The county, which is almost triangular in shape, is bounded on the north and north-west by Northumberland, on the west by Cumberland and Westmorland, on the south by Yorkshire, and on the east by the German Ocean; the last forming the base of the triangle. The coast is generally low, but there are cliffs of magnesian limestone; and at Seaton Bents there are rocks of the new marl or new red sand-stone formation. As a general rule the county is hilly, the valley of the Wear (Weardale) separates the two principal chains of hills on the west. A considerable area is occupied by high-lands covered with heather, and noted for grouse. The highest points are Kilhope Law 2,196 feet, Collier Law 1,678 feet, Bolts Law, and Baron Hope. A few cattle, colts and black-faced sheep, are fed on these wild heaths. The chief rivers are the Tyne, which forms the northern boundary of the county; dividing it from Northumberland; the Derwent, a tributary of the Tyne, flowing

through a richly wooded valley, forms a similar county boundary on the north-west; the Wear rises near Kilhope Law, and after receiving many tributary streams, flows in an easterly direction to Bishop Auckland, where it turns to the north-east, and flows in a very winding course. amidst a great variety of scenery to Durham, where it adds to the beauty of that "landscape city;" beyond, after passing Chester-le-Street, it empties itself into the German Ocean at Sunderland, its embouchure being the site of the celebrated docks in that town. The Wear is rather jealous of the Tyne, and vice versa. The TEES rises in Cumberland, and for the first few miles forms the boundary between Cumberland and Westmorland; after receiving the waters of the Crook, it is the separation of Westmorland, and afterwards of Yorkshire from the county of Durham. emptying itself into the German Ocean below Stockton and Middlesborough, between Redcar and Hartlepool. The tributaries of the Tees are found in valleys of singular beauty around and above BARNARD CASTLE. to which we recommend the tourist. We know of few scenes in England which can equal the romantic scenes to which we allude, one of them the scene of Sir Walter Scott's poem of "Rokeby." With Mr. Brown, of Barnard Castle, as a companion, and the obliging host Mr. Lee as guide. we can promise a treat which will never be forgotten by a lover of nature. who visits the Tees above Barnard Castle. There is no canal navigation, but the county is covered with an amazing net-work of railways constructed by the coal-owners, for the conveyance of coals from the pits to the rivers Tyne, Wear, and Tees, (where they are shipped), or to the main arteries of iron roads.

The geological features of the county are perhaps less remarkable than those of Yorkshire. The uppermost formation is the new red sand-stone, which is found in the lower part of the valley of the Tees, and between its mouth and Hartlepool on the coast; the conglomerate limestone crops out beneath the north-western limit of red marl, extending along the coast to the mouth of the Tyne, and along the upper part of the valley of

the Tees. On the coast the upper stratum is a sort of breccia, filling the chasms in the rocks. The thickness of the limestone varies from about seventy feet at Sunderland, to more than 300 feet at Hartlepool. The strata dips to the south-east, and in its sides are some fine caverns worn by the action of the waves. In the southern part of the county is a remarkable basaltic dyke, between Cockfield and Bolam, and another also in the same line, crosses the bed of the Tees near Yarm. The coal in contact with this dyke is charred to a cinder, whilst the sulphur has been driven off from the pyrites (sulphuret of iron) near to it.

The coal field belongs to that of the north of England, and is described along with it. It is bounded on the west by the mill-stone grit, as the traveller will easily find if he passes a short distance along Tyne-side; from whence mill-stones are an important exportation. The remainder of the county west of the mill-stone grit is occupied by mountain limestone, alternating with siliceous grit and slate-clay. For further information we should refer the geological student to Mr. Greenhough's Geological Map of England; to Mr. Winch's work on local geology, or the papers by Phillips and Conybeare, in the fourth volume of the Geological Transactions, under the head of "Outlines of the Geology of England and Wales." The carboniferous limestone is the great devositary of the metals; of which lead is the chief.

The climate is mild, and there are some spots well suited for the retirement of the invalid. The cultivation is rather above the average, and the demands of the towns are gradually lessening the area of the moors. Durham horses and cattle, particularly the milch cow, are in great repute.

The county was formerly governed as a separate province of the king-dom by the Bishops of Durham, but the palatinate is now transferred to the crown. It is divided into four "Wards," viz:—1, Chester Ward in the north; 2, Darlington on the west; 3, Easington on the east; and 4, Stockton Ward on the south and east. There are in the county one city. eight boroughs, and six other good market towns. The benefices

belonging to the See of Durham are among the wealthiest in England but the dissenters preponderate in the county. By the Reform Bill the county was divided into two portions, each of which returns two members to Parliament.

The history of Durham dates back to the earliest antiquity. Brigantes were the tribe in possession when the Romans arrived and subjected them, under the command of Agricola. The invaders being defended by the Wall of Hadrian, or Severus, which extended from sea to sea across the Island, remained as occupants till they finally withdrew from the Island. Roman antiquities have been found in all parts of the county. Under the Saxons, this section of the country was included in the kingdom of Deira. For twenty years subsequent to the conquest, Durham suffered much at the hands of the Norman brigands, and the Scottish military thieves, the district being almost depopulated. early part of the 14th century it was the scene of further rapine by the Scotch marauders, till 1346 when King David, having become more bold than wise, accepted battle from the Prelate's army at Nevill's Cross, where the northern soldiers lost their lives and their king his liberty. time of the Reformation, the See of Durham was held by Cuthbert Tunstall, a noble and liberal ecclesiastic in troublesome times. under the policy of Edward VI., he was restored under the violent reaction of Mary's reign, but finally deprived when Elizabeth came to the Durham has indeed been the scene of some of the most violent throne. exhibitions of fanaticism; it was also witness of some of the struggles between King Charles and the Parliament, but the local history of the county has not presented any remarkable features of interest since that tıme.

The general characteristics of the part of the county through which the line passes are not very impressive, as the direction of the iron road has been dependant upon the points at which it is likely to find traffic; hence we see much of coal pits, iron works, blast furnaces, and chemical works,

with fields either desolated by the atmosphere of smoke and dust, or inturally sterile. Yet it is rich in natural loveliness, as we shall be able to prove to the tourist as he passes along.

Resuming our journey we shall supposed the train to have arrived at

DARLINGTON,

Where a very fine and commodious station has been erected recently, and where there is every accommodation for the traveller in passing. The town, not inappropriately, has been nicknamed the "Quaker's City," for it owes much of its wonderful prosperity and increase to the members of the Society of Friends, who, in promoting their own interests, have conferred innumerable blessings upon their neighbours and fellow townspeople. Here the influence of the Pease family—the early patrons of George Stephenson—may be said to be supreme; and here may be said to have been the birth-place of the railway system; and here, and in the immediate neighbourhood has been witnessed its greatest pecuniary success, for the line from Darlington to Stockton was the first constructed by the inventor, and it pays one of the largest dividends paid by any railway undertaking. Just outside the station the first locomotive, an engraving of which we give on page 12, used to stand; we hope its removal has only been temporary. It is worth more than a glance by the unscientific. who will see at once the immense improvements which have been made. but will perceive at the same time that the original principal remains unchanged.

Darlington is a busy market and municipal town, the seat of a poor law union containing forty-one parishes and townships, the total population of which in 1851 was 21,618; in 1861 it was 26,109, so that since the excess of births over deaths during the period accounts for only 3,131 additional persons, it is clear that 1,360 new settlers must have been attracted to the locality by profitable employment. During the same period 756 new houses have been built and occupied; and the fact that each of these contains on an average little more than five persons, is

highly flattering to the social condition of the people, who are employed in in cotton, worsted, flax, and iron manufactures; also in the making that optical lenses. This would be still more remarkable if we had return to which would show the population and houses of Darlington apart from the surrounding locality. The town is situated on the eastern slope of the little river Skerne, in the midst of a very fertile district. It is 235 in miles from London, 69 from Normanton, 44½ from York, and 18 from Durham. The climate is mild, and somewhat relaxing, but it is favourable to longevity, for the depressing influence mainly depends upon removable causes.

Darlington is a great railway focus; for besides the North-Eastern, which puts the town in communication with all the important towns to the north and south, there are lines to Stockton and Middlesborough in the east; Barnard Castle, and other important places in the west, and to Bishop Auckland and West Auckland in the north-west.

The parish church of St. Cuthbert's is one of the finest ecclesiastical edifices in the county, and is of very ancient date. While we write, it is undergoing restoration and repair at the hands of Mr. Gilbert Scott. St. John's Church, close beside the railway station, was erected in 1848-50, the foundation stone being laid by George Hudson, Esq., the "railway king," who at the time was Lord Mayor of York. Holy Trinity Church is on the road from Darlington to Staindrop, and was erected in The Catholic Church in Paradise Lane was built in the Gothic style, from designs by Ignatius Bonomi, in 1827, and is presided over by the Right Rev. W. Hogarth, D.D., titular bishop of Hexham. There are also chapels for Baptists, Friends, Congregationalists, and three bodies In its educational institutions Darlington is highly favoured. It contains a Grammar School founded by Queen Elizabeth, two National Schools, three British Schools, a Catholic School, and a Female School of Industry. Besides the Grammar School, Darlington contains about twenty public charities, including a Bluecoat School, an Apprentices' Fund and numerous Alms Houses

The market place is a large square in the centre of the town, with St. Cuthbert's on the eastern side, and numerous streets or "gates" branching from it. Until the present year, it contained a Town Hall, and an ancient market cross, but these have just been removed, in order to carry out a comprehensive scheme of improvement, comprising a new Hall, Council Chamber, clock tower, &c., which will much improve the appearance of the town, and add greatly to the convenience of the inhabitants.

A public park, situated about a mile to the south of the market place, was formed in 1854, under the auspices of the local Board of Health. It contains about twenty acres of land, and access is obtained to it by a bridge thrown across the river Skerne. It may be mentioned here, that this river is spanned by two other bridges at Darlington. One, of stone, is at the east end of the parish church; another, of cast iron, stands at the foot of Workhouse Lane; and there is a stone bridge over the Cockerbeck, in North Gate, while foot bridges over both forks of the Skerne connect Priestgate with Clay Row.

The Mechanics' Institute, a handsome building, in Skinnergate, was erected in 1853, at a cost of £2,400. It contains a reading room, library, committee and class rooms, a lecture hall, and other offices. The inhabitants have also a Subscription Library, founded in 1825, and which is still largely patronised. The other public buildings are the Dispensary, Baths, and Police Court.

The principal iron works at Darlington are situated at Albert Hill, a little to the north of the railway station. As we proceed northwards we shall pass this large establishment, which was erected out of the materials of the building used for the Manchester Art Treasures Exhibition. The traveller who visited that Exhibition will readily recognise the roof of the iron works. Commenced in 1859, this establishment turns out about 600 tons of rail (besides bar) iron, per week. The building is nearly 450 feet long, by 112 feet wide, and comprises two mills, seven forge hammers, and forty-five puddling furnaces. The cleanliness of the place, and the

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evident desire of the proprietors (who are Manchester gentlemen) to mintain it, and at the same time to secure the greatest possible amount of comfort to their men, whilst at work, deserve the highest praise. Adjoining this establishment are the South Durham Iron Works, consisting of three blast furnaces, which have been in operation for eight years. In the same locality are the Darlington Forge Company's works, making all descriptions of forged iron, and employing a large number of hands. All these works may be said to have been called into existence by the development of the Cleveland ironstone mines.

Among the other principal manufacturing and commercial establishments at Darlington are those of Messrs. Henry Pease and Co., who, besides two extensive wool warehouses, have three mills. The first, the Low Mill, is near the old church. Here the first operations are performed on the wool—washing, carding, and combing. The second or Priestgate Mill stands in the locality whose name it bears. Here the wool undergoes a variety of processes until it is ready for sale as yarn, or for the third or Northgate Mill, where the weaving processes are carried on. The principal goods manufactured by Messrs. Pease and Co. are Coburgs, for the production of which they are celebrated. The firm was established above 120 years ago, and gives employment to 800 men, women, and children.

The Stockton and Darlington Railway Company's Carriage and Waggon Works provide employment for a large number of persons, and the premises are about to be extended. Very much of Darlington's prosperity and extension is undoubtedly due to this railway company, which, by the way, has a large and commodious suite of offices in the town, in which about a hundred persons are engaged as clerks.

Near Darlington are four curious pools, or springs of water, called "Hell's Kettles," the origin of which is thus described in *Brompton's Chronicles:*—"On Christmas Day, 1179, a wonderful matter fell out at Oxenhall, viz., that in the land of Lord Hughe, Bithop of Duresme, the

ground rose up to such a height, that it was equal to the tops of the highest hills, and higher than the spires and towers of the churches, and so remained at that height from nine in the morning until sunset. at the setting sun the earth fell in with such a horrid crash, that all who saw that strange mound, and heard its fall, were so amazed, that for very fear many died, for the earth swallowed up that mound, and where it stood was a deep pool." So says the ancient record, and there seems to be no other way of accounting for the pools, than by attributing their origin to volcanic action. They are not quite close together; one of them—the smallest-being in a field next the turnpike road, between the second and third milestone from Darlington, and the other three in the second field from the road. The diameter of the three large pools is about 38 yards, and their respective depths 191 feet, 17 feet, and 14 feet. The diameter of the fourth and separate pool is 28 feet, but it is only 5½ feet deep. They are all nearly round; the water stands to the brim, is quite cold and impregnated with sulphur; it curdles milk, and refuses to unite with soap. Though near the level of the Tees, their waters are never affected by any flood or other variation of the river, and there seems no reason to suspect any communication with the Tees. The three large ones are connected by a surface channel, and the water, after supplying the neighbouring farms, in the shape of a small streamlet, flows into the Skerne.

Leaving the spirited "Quaker's city," we arrive at

AYCLIFFE,

An ancient village on the old north road, the station for Great Stainton, and Redworth. Linen was formerly manufactured to some extent in this village, but it was discontinued about the year 1837; and the principal trade of the place now consists in lime burning. A little beyond, we arrive at the junction with "the Clarence Railway," running to Stockton and Middlesborough on the east, and to Bishop Auckland and Welsingham on the west. Wynyard Park, a seat of the Dowager Marchioness

of Londonderry, is nine miles distant. Leaving Preston-le-Skerne at Mordon on the left, we arrive at

BRADBURY.

In itself a place of no great importance, but affording a station for Hardwick Park, Chilton, and Windelstone Hall. Hardwick Park is situated in the midst of beautiful grounds, and is worth inspection; it belongs to the Russell family. The Durham County Lunatic Asylum is situate at Sedgefield, a few miles to the eastward, but is more conveniently approached from

FERRY HILL STATION,

Which is the point of junction for the line to Hartlepool. The spot is an ague-giving marsh, and the coal pit at Little Chilton, in the vicinity, is one of the wettest and most unhealthy in the district. But the temperance reform has lessened some of the effects of the natural evils attaching to the place. There is a clean temperance coffee house in the village. Four miles off is Whitworth Park, the seat of Mr. Shafto, and Brance-peth Park and Castle are five miles distant. Passing down this short branch to Hartlepool, we notice Coxhoe House near Coxhoe station, Trimdon, a colliery village, Wingate and Castle Eden, where there are important coal mines and iron works. The castle is the seat of Rowland Burdon, Esq., chairman of the Quarter Sessions for the County of Durham. Six miles beyond is the old town and port of

HARTLEPOOL.

This, though a very ancient town, owes its present prosperity to the introduction of the railway system, which has connected it with the coal and manufacturing districts inland. Its founder, according to tradition, was Hieu—the first woman in this part of the kingdom that took the vows and assumed the habit of a nun. She founded a monastery here,

about the year 640, and this the antiquaries in the town delight to tell us, was the origin of Hartlepool. In the year 1200, King John made the town a borough, and half a century later Robert de Brus "builded the haven and wall about the town of Hartlepool, with ten towers on each side of the haven, and a chayne to be drawne between them near the haven, which haven would hold a & sayle." During the Scottish wars the place was considered of great maritime importance, but when armaments on this part of the coast came to be no longer needed, and the shipping of the north found employment in the coal trade of Newcastle, Hartlepool began to decline, and its importance may be said to have gone out with the house of Tudor. A local writer states that in 1832 the town presented "the most dreary and desolate prospect that can well be imagined. The pier had been thrown down by a gale; the walls of the harbour had long been a mass of ruin, and the same air of desolation and decay pervaded the whole place."

But the year 1832 was to witness a change both in the appearance and the fortunes of the dilapidated old town. The opening of the Stockton and Darlington and the Clarence Railways and the foundation of Seaham Harbour directed attention to the fine natural capabilities of Hartlepool, and a scheme was projected for re-opening the port, constructing docks, and laying down a railway to connect the new works with the important coal field of the south-east of Durham. The scheme was well supported, an Act of Parliament was obtained, and the dock was opened on July 9, 1835. In the same year, a rough sort of pier was made for the purpose of enabling the sea to scour the harbour, and in 1836 a light was placed upon the pier. From some cause or other, which it is not necessary here to explain, the works were not so successful an a pecuniary point of view as had been expected, and in 1846 the dock and railway were leased for thirty-one years by the North-Eastern-then the York, Newcastle, and Berwick-Railway Company.

In 1851 an Act was obtained for constructing a pier from the mainland

at the north of the bay. This work has been completed, and adjoining it is the Heugh Lighthouse, the lantern of which is 84 feet above high water mark. At the base of the lighthouse are two guns, with a far blast for heating shot, and further north are batteries for the coast brigade, the naval reserve, and the artillery volunteers, a series of works capable of mounting twenty guns of the heaviest calibre, and there are also recently-erected barracks for the accommodation of the Durham Artillery Militia. Some portions of the old walls and defences of the town, erected by Robert de Brus, remain, but they are gradually disappearing to make way for modern improvements.

The railway approaches the docks by way of an isthmus from the north-west, and passes by a long row of coal "staiths" between the tidal basin on the south-west, and the Victoria Dock on the north-west, each extending over about twenty acres. Here are numerous coal drops and ballast cranes, and all the appurtenances necessary for carrying on a large export trade.

Hartlepool contains two churches—St. Hilda's and the Holy Trinity. The former is of very ancient date, and occupying an elevated position forms a very conspicuous object along the coast. The latter was erected in 1851-2, to accommodate the increased and increasing population. The Catholics have built a very handsome church in Middlegate Street, which contains some remarkably fine stained glass windows, and a peal of eight bells. The Baptists, Congregationalists, Presbyterians, and three denominations of Methodists, also have places of worship in the town. The education of young Hartlepool is conducted at two endowed schools, a Catholic School and a Ragged School, and for the instruction of those of riper years there is a Mechanics' Institute, a Working Men's Institute, and a Commercial News Room.

The trade of Hartlepool depends principally upon the exportation of coal, and there are establishments for the manufacture of iron and wooden ships, marine, and other engines, anchors, chains, and other shipping

gear, and bottles. An extensive fishing trade is also carried on, employing not less than 700 men and a large number of boys.

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The coast in the neighbourhood of Hartlepool is highly picturesque, and the few existing remains of the ancient wall afford a tolerably good promenade. A little to the north of the East Battery is a small rock detached from the moor, and the space between this rock and the mainland is called "The Maiden's Bower." It is related that over here a young woman named Mary Farding was thrown by her seducer, William Stephenson, "a merchant of Northallerton," in the summer of 1727.

Black Hall Rocks, so named from their sombre and dismal looking recesses, are situated a few miles to the north of the town. This singular and romantic cluster of rocks presents one of the most interesting objects for the contemplation of the tourist to be met with along the coast of Durham. Some of the caverns penetrate to a great extent into the rocks, and recede far beyond the light of day; others are open, and supported on natural pillars. These have been formed, no doubt, like other caves of a similar character, by the ceaseless action of the waves, which has also separated enormous masses from the coast, washing some away but leaving others standing like the vast towers of a cathedral. The scenery around the caves, too, is well worth seeing, and altogether, Hartlepoof and its neighbourhood have many attractions for bathers, invalids, and tourists.

The following lines with reference to St. Hilda's Church are from the pen of Mr. James Clephan, a genial antiquarian, whose name was formany years identified with the Gateshead Observer.

THE CHURCH AND THE MILL.

By Hartness Strand, stands Stranton Tower, Strong as it stood of yore, When Norman hands the church set down Upon this Northern Shore. Change hath come o'er the church, and 'tis A history writ in stone; Yet calm and firm it looks around, And keeps its ancient throne.

The barren sands that lay between
The village and the sea,
Touch'd by a master spirit's wand,
Have grown a goodly tree—

A crowded mart, with streets and fancs.

And docks, and fleets, and piers;

Yet Stranton church is lordliest still,

And proud its tower uprears.

And by the church the tapering mill
Lifts up its loftier head;
And round and round it flings its arms
Preparing daily bread.

Six days the honest miller works,
If heaven gives favouring winds;
"To labour is to pray," and so
He worships as he grinds.

And once in seven the village-flock, When motionless the mill, Go up to prayers, and keep the day Which says to earth "Be still."

Thus church and mill together work,
And this great truth make known,
That man must live by daily bread,
But not by bread alone.

We will now cross the bay to

WEST HARTLEPOOL,

For although that town is not directly approached by the North-Eastern system, it is so intimately connected with the old town, and its rise and progress form so remarkable a chapter in the history of commercial enterprise, that to pass it by without a single line of notice would be an unpardonable omission.

It appears that shortly after the opening of the dock at Hartlepool (which for the sake of distinction we will call Old Hartlepool), attention was directed to the western end of the bay, then a heap of sandhills with only a windmill and a solitary house in their vicinity, as a suitable place for the shipment of coals from the southern and south-western portions of the county of Durham. These coals had previously been sent to the Tees, but the navigation of that river was somewhat intricate, and it was thought desirable to send them at once to an ocean dock, to be formed on - the beach at Hartlepool. After a good deal of opposition a bill for the construction of docks at this place received the royal assent, and a company was incorporated under the name of the Hartlepool West Harbour and Dock Company. On the 1st of June, 1847, the harbour, formed by stone piers projecting from the land, containing an area of about 13 acres, and a dock of 8 acres, excavated in the neighbouring meadows, were opened amidst great public rejoicing. In 1851 the Dock Company and the Stockton and Hartlepool Railway Company amalgamated, and the union was attended with most beneficial results. Greater harbour and dock accommodation became necessary, and new piers were constructed enclosing an area of 44 acres. Another dock, called the "Jackson Dock" in honour of Ralph Ward Jackson, Esq.,—to whose energy and public spirit the whole enterprise was owing-opened its gates on the 1st of June, 1852, and on the same day the Leeds Northern Railway was completed, connecting West Hartlepool with the important manufacturing districts of Yorkshire and Lancashire. In 1854 another dock was added, and every conceivable arrangement has been made for facilitating and increasing commerce, the present extent of which may be imagined when we state that the declared value of merchandise exported from West Hartlepool in the year 1861 was £5,926,909, and from January to June 1862

£3,283,041. In addition to this West Hartlepool exported in 1862, 975,319 tons of coals, and up to June 1862, 423,447 tons of the mineral.

The construction of docks, tidal basins, timber yards, coal drops, other extensive works of this nature, of course, gave employment be large number of persons, and concurrently with the growth of comments arose a modern town on the aforetime desolate sandhills of Stranton. m2 local chronicler tells us that the houses are lofty, most of them are but of stone; and the shops are spacious and elegant. Every thing is one gigantic scale, and the inhabitants are a lively, go-ahead people—a nee that has been accustomed to large towns, and bustling, active life. 1854 saw an elegant edifice of the Church of England rear its head, and a pile of buildings called the Athenaum sprang up about the same time. was commenced a Congregational Church of the Gothic order, with spire, &c., and a cemetery, gas works, water works, and a handsome structure for the drama, were all set on foot about the same time. In 1860 a new Custom House was opened, and year after year has seen some new project set on foot and executed with a spirit that indeed reflects credit on the town. The education of the rising generation has been cared for by the erection of extensive schools, and the wants of the good housewife may be well supplied at the spacious market place, which occupies two acres of ground and is partly covered in.

The principal manufacturing establishment in West Hartlepool is the shipbuilding yard of Messrs. Pile, Spence, and Co., which is said, and we believe correctly, to be the largest shipbuilding yard out of Liverpool. Some idea of the extent of the place may be derived from the statement that within the yard there are nine, and outside the yard three acres of land all occupied by the works going on.

An Act of Parliament has been obtained for converting Hartlepool bay into a harbour of refuge; a work that is greatly needed on this dangerous north-east coast.

We shall now return to the main line, and resume our journey north-

SHINCLIFFE,

A little township with about 1,000 inhabitants, but noticeable chiefly as the station for Shincliffe Hall, and for its vicinity to the great basaltic type which has produced some curious geological features in the neighbouring coal-field. Two miles beyond, and to the right of the line is

SHERBURN

3 5 .

An unimportant place, but noticeable as the point at which a line to SUNDERLAND diverges, though the passenger trains usually divide further on; viz: at Leanside. At Sherburn there is a richly endowed hospital, of which the learned churchman G. S. Faber, was at one time master. Faber's theological writings, particularly those on prophecy, have had a wide circulation. His Horæ Mosiacæ is considered a standard work, opposed to the later views of Bunsen. His talents were not solely devoted to literature, for he administered the funds of the hospital in such a manner as to increase their usefulness and value. Nearly all the buildings were of his creation, and the income of the livings under his patronage were also improved. Passing forwards we come to

LEAMSIDE JUNCTION,

Where the passengers for Durham and Sunderland change carriages.

Leaving the station on the east side, there is a road to FINCHALE PRIORY, an exquisite spot, which ought to be visited by every lover of the picturesque who has time and opportunity. The church, the erection of which is attributed to Henry de Pudsey, who lived three centuries before the Conquest, was entirely of the early English character, having a north sisle to the nave, and north and south sisles to the choir. The various abbey buildings are of subsequent styles. In its perfect state the abbey was probably somewhat similar in arrangement to the cathedral of Durham,

though on a smaller scale. Of the central tower, which was surmounted by a short octagonal spire, nothing now remains but the four columns that supported it. St. Godrie, who it is said was directed in a vision to retire to Finchale, erected a hermitage and chapel here about 1104. Here he resided for sixty-six years, practising unheard of austerities. The mortifications to which he subjected his body were extremely severe. He wore an iron jerkin, mingled ashes with the flour of which he made his bread, and not unfrequently passed whole nights at his devotions, immersed up to his chin in water. He died in 1170, and was then admitted, on account of his uncommon penances, and the great miracles he is said to have performed, into the calendar of the saints. St. Godrie is known to the learned as one of the earliest reputed Anglo-Saxon rhymers, and his hymn is quoted as one of the first specimens of Anglo-Saxon versification. It is as follows:—

Sainte Marie [clane] virgine,
Moder Jhesu Christes Nazarene.
On fo [or fong] schild, help their Godric,
On fang bring hegilich with the in Godesriche
Sainte Marie, Christe's bur
Maiden's clenhad, moderes flur,
Dil ie min sinne [or sennen] rix in mid mod,
Bring me to winne with the selfd God.

In modern English as follows:—"Saint Mary [chaste] virgin, mother of Jesus Christ of Nazareth, take, shield, help thy Godric; take, bring him quickly with thee into God's kingdom. Saint Mary, Christ's chamber, purity of a maiden, flower of a mother, destroy my sin, reign in my mind, bring me to dwell with the only God.

A little to the east of the ruins is a place named Godric's Garth, which tradition affirms was the site of the oratory and the humble dwelling of the holy man.

Bishop Flambard, about 1118, granted Finchale to the monastery

Durham, in free alms, subject to the life of Godric, who was to hold it from them, and after his death the hermitage to be inhabited by such of the brethren as they should appoint. In 1180 Bishop Pudsey granted a charter for a cell at Finchale, but it was not carried into effect until 1196, when his son Henry founded a priory for Benedictine monks sub-The number of the monks varied from time to ordinate to Durham. There were nine in 1317, eight in 1408, and at the time of the dissolution of the monasteries by Henry VIII., the fraternity consisted of the prior and twelve monks. The last prior was William Bennet, who. after the dissolution, became first prebend of the fourth stall of Durham Cathedral. This ecclesiastic seems to have cheerfully accepted the Reformation, and cast his vows of celibacy to the winds, for it is recorded that he married Mistress Anne Thompson, and the marriage is celebrated by the couplet:-

> "The friar of Finchale has got a fair wife. And every old monk will soon have the like."

He was also vicar of Kelloe, but resigned the living, and held that of Aycliffe along with his stall in the cathedral. He appears to have been more renowned for his worldly shrewdness than for learning; for when he died he was found to have been rich in plate and furniture, and his barns and granaries were well plenished. His books were valued at five shillings, which proves that his library was not of the most extensive kind.

Tourists to Finchale are shown the Wishing Chair, which is mentioned in Grose's Antiquities. The seat is beneath one of the windows of the monastery, and was reputed prior to the dissolution to possess the virtue of removing sterility from any woman, who, after having performed certain ceremonies, sat down upon it, wishing devoutly for issue. According to tradition, the Wishing Chair was formerly in great repute, and, though of stone, seems much worn by use.

The historian of the Monastery of Tynemouth, Mr. W. S. Gibson, says, in reference to Finchale Abbey, that "to the architect no less than to the antiquary these ruins are full of interest, and the more so because there is not another building of decorated work in the county of Durham. Indeed there are few specimeus of it as added to buildings of an earlier period in this part of old Northumberland, owing, perhaps, to the incessant wars between England and Scotland, in the age when decorated style prevailed in this country, and to the active part which the ecclesiastical princes palatine and their obedientaries and vassals, monastical as well as lay, were obliged to take in those desolating contests. Unpeopled and desecrated for three centuries, time has spread over the chief portion of these grey walls a mantle of venerable and luxuriant ivy, whose roots entwine about the foundations, and whose branches have penetrated the intestines of the masonry, rearing this perennial foliage where all beside is crumbling into ruin."

The locality is a favourite one for excursions and picnic parties, but there is not accommodation at the farm-house for large numbers, and consequently it is necessary to make some preliminary arrangements with Mr. Shepherd, the occupant of the farm-house. There is no public house in the immediate vicinity. The ruins of Finchale Abbey and Priory are alluded to by Mr. Clephan in one of his charming poems, which we shall quote, because it is not only apt, but because it is also explanatory of the history of the place.

FINCHALE ABBEY.

Cocken woods are green and fair; Year to year the wild flowers, blow; Spring succeeds the winter's snow; Summer follows Christmas bare.

Song birds from their slumber wake; Fill with song the ravish'd ear; Swell the music of the Wear; Build their nest in bush and brake. Where the waters gush and glide; Leaf and flower of every tinge, Shady footpaths sweetly fringe, Winding by the river side.

From the cliffs and from the grass,
Nosegays wild the children glean,
Red and blue, and white and green,
Jocund, as they glessome pass.

Cocken woods are green and fair; Year to year the wild flowers blow; Spring succeeds the winter's snow; Summer follows Christmas bare.

Finchale Abbey, old and grey, Ruin'd, roofless, wintry, hoar, Knows its summer pride no more, Moulders, moulders to decay.

Prior Untred's shade may haunt Cloisters once his cherished home, Gilding soft by Godric's tomb, Listening for the choral chant.

Looking for his lettered lore— Jerome, Bede, Eusebius, all Ready at his beck and call— Ready once, but now no more.

Silent, now, is Finchale's song,
Treasured tomes, of precious cost,
Scatter'd from her walls, and lost:
Hush'd the abbey bells' ding-dong.

Never more the dying hours,
Finchale's howloge shall knell,
Echoing the mother-bell,
Sounding from fair Durham's towers.

But these rains linger still,
Mutely murmuring "Never more;
And, where planted down of yore,
Blooms the yellow daffodil.

Blooms, and marks the garden site,
Where the monks grew fruit and flower,
Root and herb of healing power:—
Cool retreat for calm delight.

Faithful flower! to moth and rust
Finchale's monks thou will not give:
Thou wilt have their memory live,
Fair and fragrant in the dust.

Thus may we, who fain would fill Some small space in human eye, When entomb'd in earth we lie, Plant on earth some daffodil.

Resuming our seat at Leamside, and leaving Durham for subsequent description, we continue our journey northwards—towards Gateshead and Newcastle-upon-Tyne. The first station at which we arrive is

FENCE HOUSES;

In itself an unimportant place, but the station for Lumley Castle, the seat of the Earl of Scarborough, which is two miles distant. ing is an ancient quadrangle. It is open to respectable persons. are some curious portraits, &c., to be seen, and the scenery around is very Some of the largest and most profitable collieries in the charming. world are those at Hetton, in the vicinity. An inspection may be obtained by suitable persons, by a note, previously addressed to John Daglish, Esq., the viewer. If the visitor is fortunate enough to secure the company of this gentleman, he will find him a most delightful companion, who is not only thoroughly conversant with the theory and practice of coal-mining, but well acquainted with all the branches of science which have the remotest bearing upon it. In a tour of inspection under circumstances of some danger, which was undertaken by the writer of these pages, immediately after a frightful and fatal explosion, he had the pleasure of Mr. Daglish's company during an arduous exploration of

wen or eight miles underground, from eleven at night till seven in the The arrangements of the colliery are as perfect as they are anderful, and every effort is made by the proprietory to secure not only e safety of the men, and their comfort, but their intellectual and moral Iture. We have seen the colliers employed here, sit and listen with ep interest and attention, to a lecture on "John Milton," occasionly applauding the sentiments of the speaker, and frequently expressing We have seen them also in council eir approval in other modes. nongst themselves, but always intelligent and well purposed. All formation about the neighbouring pits and works, some of which belong the Marchioness of Londonderry, may be obtained from the station master Fence Houses, to whose civility and intelligence we pay a deserved mpliment. Two miles beyond Fence Houses is

PENSHER JUNCTION,

hich is arrived at after catching a glimpse of the Wear, which gives alth to Sunderland. It is the station for Lambton Castle, the seat of e Earl of Durham, which has been held by the family since the Conest; and may be momentarily seen a little further on. It is also a int of junction for Sunderland, which we shall notice hereafter. On eminence to the east is a handsome monument, erected in honour of e late Earl of Durham, the famous "John George Lambton," which is sible for many miles around. Beyond, we cross the Victoria viaduct, O feet long, 130 feet high, and of four arches; the largest being 160 feet an, and after a run of about two miles, arrive at

WASHINGTON,

rom which a railway for the conveyance of "minerals," runs up to CANHOPE in Weardale, where more than 2,000 persons are engaged in a lead mines. Near Stanhope are the extensive works of the Weardale on Company. There are also at Stanhope some interesting ruins.

Washington itself, is not an important place, except for the ch works, which are carried on with great skill. Here the metal Alm has been extracted in great perfection, after the manner of the discoverer, and some very fine specimens of this curious and useful stance were exhibited by Messrs. Reid and Sons, jewellers, of New in the International Exhibition at Kensington. The following which were written as an enigma, describe some of its various quand the forms in which its combinations are known.

SCIENTIFIC ENIGMA.

Till lately unknown I have slept in the earth. Yet scarcely a city without me has birth; Both mansion and hut depend on my powers; My bosom bears roses and millions of flowers. The ruins of Carthage show fragments of me; I am aides of the mountain and base of the sea: I brought down the water to Rome in her glory, And Egypt in me has buried her story; , I am dirty, yet clean; more than silver or gold. Untarnished by time. The chemist can hold Within me the strongest acids they keep; I'm a cup and a spoon for the feverish lip. Sometimes I'm a crystal, transparent as glass, Yet sunbeams are coloured as thro' me they pass; I am purple, blue, pink, red, and all shades of yellow. Depending upon what sort of thing is my fellow; I'm a tanner, a dyer, a medicine too, And a puzzle to Robinson—surnamed—Crusoe: I'm a brooch, or a ring, or a tile, or a brick; I flash on a helmet, or make the mud stick: I'm a love token gift, or a mob's angry weapon, But my beauty is great, although it's a cheap one.—J. B. L.

The colliery surgeon here will be found an agreeable compar permission is obtained to visit the works.

Passing onwards we arrive at Pelaw Junotion (for South S and Monewearmouth), and having passed Felling station, near

the large chemical works of Hugh Lee Pattinson and Co., we find elves on the viaduct over

GATESHEAD,

ich has been derisively called "a long, narrow lane, leading to Newle." but which is a borough of growing importance, with a corpora-, a member of parliament, and a market. It is the seat of a Poor Union, which embraces nine parishes and townships, the total popon of which in 1851 was 48,081; in 1861 it had increased to 59,411; nat as the excess of births over deaths accounts for an increase only .440, the new settlers in the place must have amounted to 3,790, or new comers every year. The share which the town has had in this th of population may be judged from the fact that the population in the borough rose in the decennial period from 25,568 in 1851, to 89 in 1861. The population formerly consisted chiefly of pitmen. there are now a large number of highly skilled artisans, who find loyment in the works of Messrs. Crawshay and Company, Messrs. ott and Company, and the works belonging to the North-Eastern way. Many of the upper classes have also been led to settle and I houses in the vicinity, on account of the more moderate price of compared with Newcastle, from which it is only distant a short walk the old stone bridge, or the magnificent High Level Bridge, which at the time of its construction, one of the wonders of the world. parish church, which forms a prominent object from the railway, is ted on the brow of the hill overlooking the "coaly Tyne," which The church, which is an ancient cruciform structure, was y destroyed by the tremendous explosion which occurred at a fire of st unequalled magnitude, on the 6th of October, 1854. The cause e explosion has never been explained. The fire was of such intensity have fired the shipping in the river, and the buildings on the site side. At one time it was expected to have destroyed a large.

part of Newcastle. Neither in Gateshead or Newcastle are there are reliable means for the extinction of fires, and the conflagration therefore burnt itself out. There were about fifty-six lives lost; and property destroyed, estimated at about half a million of money. No evil, however, is without compensation; and the fire, like the fire of London, removed a quantity of property highly pestiferous and inconvenient, on both sides of the river. The use of such a violent sanitary measure will be understood by a reference to the awful mortality which arose from cholera in Gateshead. An admirable local pamphlet, entitled "The Three Warnings," gives a quantity of useful statistics on the subject. The ground cleared by the explosion on the Gateshead side of the Tyne is now being made into commodious quays, connected by a short line with the North-Eastern Railway.

There is a legend that it was in some of the streets near the Quay, where Daniel de Foe wrote his "Robinson Crusoe." The approaches to the old bridge are exceedingly steep, and in winter almost impractible for carriages; the road under the High Level line, and a part of the bridge, which is beset with no such difficulties, but is chargeable with a toll, is then used. There are places of worship for almost all sects; that of the Catholics being a fine building; the Mechanics' Institute is a very handsome structure, and reflects great credit on the locality; and there are manufactories of chain-cables, soap, glass, cement, wire rope, and alkali.

Among the more prominent of these establishments are the famous ironworks of Messrs. Abbot and Co., and Messrs. Hawks, Crawshay, and Co., which stand side by side along the river's bank, and at night cast their lurid glare across the troubled waters of the Tyne.

A little further to the eastward, at a spot called Mount Greenwich, are the premises of the Tyne Soap Company, covering about three acres of ground. The buildings are admirably arranged for the business, and the soap manufactured by the company is held in high esteem by consumers.

On the ground floor are the stores of salt, resin, and other materials used in the manufacture, the engine which supplies the motive power to the establishment, and a range of furnaces for utilising the spent lye, or lees, which is boiled down with a weak alkali. Here, too, the tallow is melted by steam, and pumped up into a large cistern at the top of the buildings, from whence it descends into from fifteen to twenty large coffers, technically called soap-pans, which are arranged on the second floor. latter department, are conducted the succeeding processes by which the greasy, unsightly mass, is converted into all the varieties under which soap is known; from the common brown, the mottled, and the pale yellow of Mrs. Brown, the washer-woman, to the handsome tablets which perfume my lady's dressing room; and these operations form, in their way, an interesting sight. When trade is moderately brisk, the Tyne Soap Company make about a hundred tons of soap per week; and occasionally this quantity is exceeded; the variety most extensively manufactured being the pale yellow. Newcastle and Gateshead, and the surrounding towns and villages, derive a very considerable proportion of their supply for domestic consumption from these works, from whence, also, large quantities are sent to manufacturers and dealers in Lancashire, Yorkshire, and adjoining counties; to London, Edinburgh, Aberdeen, and various other places at a distance. The works are distinguished from the surrounding manufactories by a handsome chimney, about 130 feet high; and although they do not possess a river frontage like many of their neighbours, access to the Type is obtained by means of an inclined plane, worked by a stationary The managing directors are Messrs. W. H. Mackenzie and A. engine. Cruickshanks.

A few yards further down the river, located in a building which forms a prominent object in the landscape, as shown in our engraving, are the sement works of Messrs. I. C. Johnson and Co.

In a sail down the river, these works are certain to attract attention, by their large white frontage—which contrasts strongly with the dingy

buildings around—and by the huge statue on the roof, which appears to be threatening destruction to some unfortunate wight below. Here are manufactured Portland, Roman, and Keene's Patent Cement, Plaster of Paris, Patent Mastic, Blue Lias Lime; statuary, vases, chimney pieces, and other articles of which cement or plaster forms the principal ingredients. On the premises are kilns, large grinding mills, and other machinery, worked by steam engines possessing in the aggrate 150 horse power, and the various departments give employment to several hundred men. Though all the details of manufacture are necessarily not revealed the visitor cannot fail to be highly gratified by a stroll through the works, and watching the numerous processes, from the arrival of the raw material at the wharf, to its exit as a finished article from the hands of the coopers and packers. Messrs. Johnson & Co., are celebrated for their manufacture of Portland Cement and Keene's Cement, the latter being a patent article which they have the privilege of making. The firm exports largely to all parts of the world, its position on the river's edge affording excellent facilities for shipment. In addition to the Gateshead works, which are under the personal management of Mr. I. C. Johnson, the company has premises at Cliffe on the Thames, and metropolitan offices near the Coal Exchange.

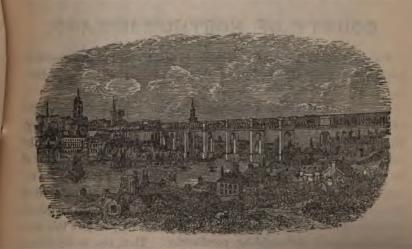
At Gateshead-Fell, a short distance from the town, there is a quarry for grindstones which are exported vid the Tyne, to all parts of the world. Leaving Gateshead station we enter upon the High Level Bridge, one of those works which put the top-stone to the fame of the Stephenson's. We cannot do better than quote from Mr. Smiles's "Story" the history of this piece of iron architecture.

"There was still another great work connected with Newcastle and the east coast route which Mr. Stephenson projected, but did not live to see completed,—the High Level Bridge over the Tyne, of which his son Robert was the principal engineer. Mr. R. W. Brandling—to the public spirit and enterprise of whose family the prosperity of Newcastle has been





in no small degree indebted, and who first brought to light the strong original genius of George Stephenson in connexion with the safety-lamp -is entitled to the merit of originating the idea of the High Level Bridge as it was eventually carried out, with a central terminus for the northern railways in the Castle Garth, at Newcastle He first promulgated the plan in 1841; and in the following year it was resolved that Mr. George Stephenson should be consulted as to the most advisable site for the proposed bridge. A prospectus of a High Level Bridge Company was issued in 1843, the names of George Stephenson and George Hudson appearing on the committee of management, Mr. Robert Stephenson being the consulting engineer. The project was eventually taken up by the Newcastle and Darlington Railway Company, and an act for the construction was obtained in 1845. The designs of the bridge were Mr. Robert Stephenson's; and the works were executed under the superintendance of Mr. Thomas Harrison, one of Mr. Stephenson's many able assistants."



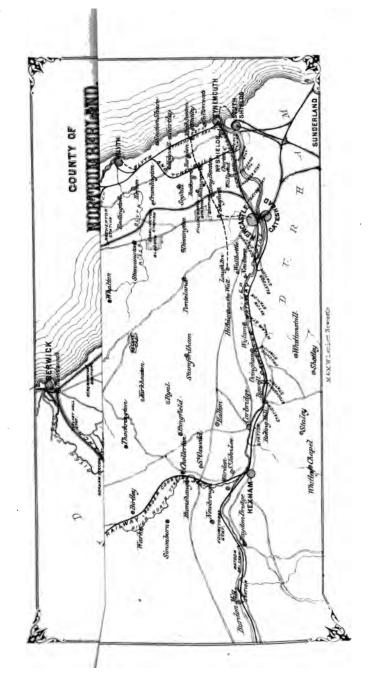
The High Level Bridge is certainly the most magnificent and striking of all the erections to which railways have given birth—more picturesques an object than the tubular bridge over the Menai Straits, and even more important as a great public work. It has been worthily styled 'the King of railway structures.'"

The High Level Bridge carries the railway on the top, and an asphalted road-way for ordinary traffic, thirty feet beneath it. The viaduct is 113 feet high, and the space between the lofty piers is 125 feet. A fine view of the shipping in the Tyne, and of the two sides of the river, is obtained from the train as you pass over. The old fashioned bridge below stands in strong contrast, and is a great obstruction to the traffic in the river. At this point we pass from Durham into the county of Northumberland, of which we shall give a brief notice, before proceeding to describe the towns which give interest to the line further north.

COUNTY OF NORTHUMBERLAND.

For many of the following particulars we are indebted to an interesting brochure by Sidney Gibson, Esq., a gentleman holding an official position in Newcastle.

Northumberland affords a tempting field, not only to the naturalist and the sketcher, but to the antiquary and the student of county history. The wild and mountainous nature of a great part of the county, the peculiarities of its architectural monuments, the dialect and character of its population, all mark Northumberland by striking features. Its remoteness, the separate nationality (so to speak) which it retained during many centuries, and the slight intercourse with the rest of the kingdom, formerly enjoyed by its inhabitants, combined, however, to give this part of England many distinguishing peculiarities. Then, too, its traditions and associations with by-gone times are full of character and interest;





and perhaps there is not a county seen in more striking contrast with the past, for works of 'the stone age' constructed by British tribesprobably the contemporaries of the unknown founders of Stonehenge and Caruac-enduring remains of Roman military occupation, feudal structures and towers of refuge and defence, are here the characteristic representations of times gone-by. But the Celtic inhabitants of Northumberland have been succeeded by a hardy and industrious people, who, instead of fashioning rude weapons of war and chase in earthy huts, raise coal, build ships, and manufacture iron for the world; and a walled town and thinly scattered villages that were ravaged by the moss-trooper, have given place to crowded haunts, spreading habitations, and a rapid extension of commercial enterprise, and mining industry. To the stony ways that were travelled by the Roman legions, turnpike roads and railways have succeeded; lands formerly swept by the border robber, now adorn a tale of peace and plenty at local agricultural meetings; and the waters of Reed and North Tyne, that in former times often reddened to the beacon fires on Scottish foray, flow through pastoral and even fertile landscapes. Thriving plantations wave on lands that continued to be waste at the beginning of even the present century, and on many a height the plough traverses camps and graves of ancient Britons. Agriculture pursued in the days of the Romans, and in the feudal ages under protection of stone walls and towers-now obliterates in its progress the defences which it no longer needs. At the mouth of the Tyne, in places where so lately as a century ago, crops of corn were raised amidst the rude 'schelings' of fishermen, a populous seaport has risen, which draws its harvests from the deep, and has at length wrested from Newcastle independence and a share in the conservancy of the river; and that town, which was defended through the middle ages by massive walls, has spread within the last thirty years far and wide beyond their circuit, and become a centre of railway traffic and manufacturing industry, with a population numbering a 100,000 souls.

Before entering on the historic monuments of Northumberland, its natural features demand some description.

In its northern, central, and western regions it is a county of mountainous hills, broad tracts of sombre moorlands, and brown heathery wastes; indeed a third of the county may be said to consist of moorlands; having an average elevation of from 500 to 1,000 feet. These vast hilly moors rise on the western and south-western frontiers of Northumberland into bold and mountainous forms of very picturesque character, but not marked by the steep and rugged grandeur of the Highlands of Scotland, or the mountains of the English lake district. The lofty range of hills, stretching with little interruption from the borders of Scotland, through Northumberland into Derbyshire, attains its greatest elevation in the wild and sterile heights of Cross Fell. To the north-west, from the high frontier moorlands of Cumberland, this range presents successive elevations, which in Northumberland culminate in the Cheviot mountains -the highest eminences in the county. The scenery in all the high regions is remarkable for breadth rather than the softness of outline of the chalk downs in the south England; and the sterile wastes derive impressiveness of aspect from their solitude and extent.

"Cheviots Mountain Lone" are the well-known eminences of an elevated region of porphyritic and pyrogenous rocks, about equal in area to Dartmoor, and extending from Chew Green and Coquet Head on the north-western frontier of Northumberland, to Flodden Field on the northeast, and from near the vale of Wittingham (on their south-eastern slope) to Kelso on the Tweed. Perhaps the Cheviots cannot be better described than by saying that they form a tripled range of rounded massive hills, some of which have a perfectly conical form. The highest attains 2,680 feet, next is Hedgehope, and then comes Yevering Bell, which attains nearly 2,000 feet, and forms a dome-shaped mass, eminent above the lesser elevations. It overlooks scenes to which the genius of Scott has given an undying charm, and many a spot celebrated in border annals, besides

Homelhaugh—the Homildows under which Hotspur and Douglas fought in 1402,—and Percy-lawe, another height associated with the memory of Hotspur's valiant race. But the great Cheviot Forest is gone, and the red deer that occasioned the celebrated chase have vanished.

One of the lower eminences detached from the range is the hill of Flodden, and below it stretches the memorable field. With its green hillocks are now mixed flourishing plantations, and it retains few of the characteristic features described by Scott. "King James's Chair" has been destroyed, but its site is marked by a clump of firs. The country was then bare and open; inclosures now stretch on the uplands, and the straggling patches of natural wood are gradually yielding to cultivation. On the adjacent ridges heather has given place to corn, habitations have risen amid green pastures, and broad plantations border the river Till. The slopes of the Cheviots are covered for some distance from their base by a sort of copsewood, but on their greater heights this verdure dwindles to brushwood, bracken, and thin turf. The whole range is intersected by wild glens and sequestered denes, and many a secluded spot is still clothed by remains of primeval forest. In some of the ravines the reddish porphyritic cliffs are exposed, and through them flow the tributaries of the river Till-shallow sparkling burns that murmur over a stony bed, or fall in little cascades through their rocky channel. Among the Cheviot Hills the tourist is in an impressive region of natural wildness-one of those few remaining realms of solitude where

> Lone Nature feels that she may freely breathe; While round us, and beneath, Are heard her sacred tones: the fitful sweep Of winds across the steep.

The wheeling kite's wild solitary cry,
And—scarcely heard so high—
The dashing waters where the air is still,
From many a torrent rill,
That winds unseen beneath the shaggy fell,
Track'd by the blue mist well.

The wild moorlands of Rothbury Forest, which culminate in the dark rugged slopes of Simonside, a hill 1,400 feet in height, form, with Ottercaps, a series of lofty hills distinct from the Cheviot range, and not of their mountainous character. Remarkable for their precipitous and picturesque crags rather than for their height, are the basaltic formations which cross the country from the north-east to the south-west, and rise into precipitous eminences of the Roman Wall. In the south-western part of Northumberland are the elevated regions of the lead mining district, and the sterile, lonely fells of millstone-grit and limestone rock. Knaresdale-which is perhaps the most picturesque part of the valley of the South Tyne-winds amidst lofty massive hills, and is the pass into the lead mining district of Alston Moor and Nenthead, surrounded by wild heights that stretch southward to Cross Fell. This hilly region of the lead mines extends from the Cumberland frontier at Alston, round the southern boundary of Northumberland, and is continued in the commons of Allendale and Hexhamshire. The counties of Northumberland, Durham, and Cumberland, join near Allenheads, in an elevated region of moorlands and mosses, from 1,000 to 2,200 feet above the sea level; and on the northern declivity the sister streams of Allen have their birth, while on the declivities to the south and east rise the Wear and the Tees.

The lead mining districts form a tract of about twenty miles in diameter in each direction, comprising the border districts just now mentioned, the Manor of Alston Moor and the mountainous region stretching to Cross Fell, the higher dales of the Wear, and the Tees in Durham, the valley of the East and West Allen, the Tyne, and the Derwent. The aspect of the higher portion of this mining district is almost unrelieved by cultivated lands; the heights are for a great part of the year commonly wrapped in mists, and snow lies on the higher fells until summer, yet, in favourable weather, the mining settlements are far from presenting a dreary wildness or Siberian climate. The great centre of lead-mining in Northumberland is Allenheads, which is 1,400 feet above the level of the

sand can boast the highest residence in England. Alston, the nighter the restaurance is almost wholly employed in mining, and much secluded from rest of the world. In the school maintained at Allenheads by Mr. caumont, a gossiping writer says he found out of fifty children assembled a some occasion a year or two ago, only five boys who had seen wheat growing, and three who had beheld the sea. The inhabitants of the district were correctly enough described more than thirty years ago, as "an industrious and loyal people, moral, intelligent, and of simple habits, whose seclusion from the rest of the county, lead them to enquiries which quicken their understanding, and induce them to seek knowledge from books." They appear still to deserve this character, and to have availed themselves eagerly of opportunities for improvement.

A branch of the Newcastle and Carlisle Railway has for some years past opened to the rest of the world the adjacent mining district of Alston Moor, and Allendale will probably ere long be penetrated by a railway.

The prevailing features of this part of the country are bleak wild fells, traversed by few roads, with patches of fir planted here and there on the steep slopes. It is stated by Mr. Sopwith, F.R.S., and President of the British Meteorological Society, that the maximum temperature of the district of Allenheads is nearly coincident with the minimum temperature of Bywell,—a place seated about twenty miles distant in the valley of the Tyne, and about twelve miles westward from Newcastle. In the elevated region described, the quantity of rain is in some years double that which falls in Middlesex; insomuch that Mr. Walter White, in his book already quoted, congratulates the inhabitants on having employment underground out of the way of bad weather! But Nature, if not remarkable for geniality as regards sky and climate in this high moorland country, has been bountiful beneath the surface. The quantity of lead produced from Mr. Beaumont's mines at Allenheads, and at the adjacent mining settlements.

of Coalcleugh and St John's, Weardale (a part of the parish of Stanhope), is understood to have amounted to nine or ten thousand tons annually. Galena (from which, as is well known, the lead of commerce is derived) is the most abundant of the minerals; and some of the ores are exceedingly rich in silver. There seems to be no doubt of the existence and value of copper ores in the Alston district, but they have not been worked with Iron ore is abundant in the shale formations of the lead mining country; and at Nunstones, near Tynehead, there is a great sulphur vein in a hill which was denominated in a lease "the back-bone of the earth:" —it is remarkable as a mineral vein, being at one part 300 feet in width, and throwing up the strata sixty feet. The lead mines of Alston Moor, which in 1734 were vested by Act of Parliament in Greenwich Hospital after the attainder of the ill-fated Earl of Derwentwater, have yielded a considerable proportion of the great annual revenues of that national institution, besides fortunes to private lessees of mines worked in the manor of Alston Moor.

All the engine work of the mines is done by hydraulic power, and one of the most interesting things in the district is this application of natural force to the aid of human labour. Not a steam-engine is used in any of of Mr. Beaumont's mines. Springs rising in the caverns of the hilk-become arteries of industry; and on the river Allen itself, the economy of water-power is something quite instructive.

This important mining field was certainly known to the Romans, of whose station at Whitley, (near the town of Alston, and on the "Maiden Way" from Caerveran on the Wall to Kirby Shore,) there are some interesting remains. When the Roman legions penetrated from York to Carlisle, their path took them from the rich mining fields of Yorkshire and Durham to cross this yet richer land of mineral wealth beyond; and the mines of the Derwent Valley (now proposed to be made accessible by a railway), the mines of Allendale and Tynedale, and those of the Cumbrian frontier, all lay within the province guarded by the Roman Wall.

In the days of the Anglo-Norman kings, the mines were profitably worked under protection of the crown, and yielded surprising quantities of silver. In those days the miners found their fuel in the forest tracts around, and until comparatively recent times the hill-sides, now so barren and hardly yielding scanty pasturage for sheep, were clothed with their native wood.

Northumberland owes much of its picturesque scenery to the basaltic rocks. They form some of its most remarkable eminences, especially on a part of the line of the Roman Wall; they occur also amongst stratified formations, and they traverse the county in the form of dykes.

Another formation that is conspicuous in Northumberland, especially in the northern and eastern regions, is the boulder-clay. It covers the eastern side of the range of Sandstone Hills which extends in a southwesterly direction from Kyloe to Alnwick Moor; in some places it forms long hilly slopes, in others it is heaped in isolated mounds resembling Then there are hills and ridges of diluvium (gravel, Sigantic tumuli. lay, and pebbles), which certainly resemble lateral moraines, and have Deen attributed to glaciers. A tortuous ridge of hills at North Charlton, Detween Alnwick and Belford, is an example; and similar mounds occur For considerable portions of the country at the foot of the eastern valleys of the Cheviots. The boulders and fragments of Scottish mountains Which occur in the boulder-clay, and are scattered over Northumberland, especially on the shores of the sea and rivers, can hardly have been transported by any other agency than that of floating ice, which probably bore the ponderous and far travelled boulders to the places where they rest, at a time when the climate of this part of the island was of an Arctic char-Beneath an overlying boulder-clay in the Hawkshill quarry, probably once an icy shore, the limestone bed in situ is in some place polished. scratched, and grooved; the workings having generally a direction from north to south.

The carboniferous limestone formations stretch from the Northumber-

land side of the Tweed at Kelso to the sea; they extend along the coast to the mouth of the Coquet, and pass under the northern and western boundary of the great coal field.

The coal series, which are of course regarded as the formations most characteristic of Northumberland, and which hold the first place in regard to its mineral wealth and maratime trade, must now be adverted to; but it would require a separate essay to give any adequate description of mining operations, or of the coal-field itself. Moreover the general characters of the coal-field have been already adverted to. The carboniferous sandstones certainly cannot be said, however, to contribute to the picturesque features of the country, except in the river-valleys, for low rounded hills, and a generally flat coast, mark the extent of the coal formations. It will be sufficient here to say, that the northern extremity of the great coal-field of Northumberland and Durham reaches to the mouth of the Coquet, and that it is circumscribed by a line following the coast of Northumberland, and running in a southerly direction from the mouth of the Type, by the magnesian limestone formations of the Durham coast, and passing by Ferry Hill nearly to Pierse Bridge on the Tees; thence, running diagonally across the counties of Durham and Northumberland, to their northern limit on the Coquet river, Bywell on the Tyne being the western boundary of the coal field in the last named county.

The coal worked further to the west—in the millstone-grit and carboniferous limestone formation, near Haltwhistle and adjacent places—belongs to isolated coal formations quite independent of the great field above described. Through this vast basin fifty-seven different seams or beds of coal lie in succession; the thickest and most important of which are respectively about seventy-five fathoms and one hundred and thirty-five fathoms deep, a little to the eastward of Newcastle. The most important of the beds worked in the productive 'Steam Coal' district, between the Tyne and the Blyth, lie from ninety to one hundred and ten fathoms deep, and the workings in some instances extend a mile and a half from the pit-

whaft. The 'High Main' seam lies under one hundred and sixty fathoms of beds of stone at Jarrow, but rises to the cliffs beyond Tynemouth, only two miles to the northward. As regards geological succession, the mountain-limestone and the strata of the lofty hills of Alston Moor lie under the deepest coal mines of this great basin.

From this glance at the carboniferous formation, in which we find stored up the remains of forests that in some pre-Adamite condition of our globe waved in tropical luxuriance on the area now forming the county of Northumberland, it is time to pass to the existing sylva of this part of England. To the regret of the lover of forest trees and ornamented woodland, there are few localities in which Northumberland can boast of fine old timber. Remains of gigantic oaks that grew in its primæval forests have been found in peat-mosses, in spots now either destitute of timber, or where the largest living trees are dwarfs compared to them, or in alluvium of the river banks from Newcastle to the sea, now crowded by objects very unlike forest timber, and more familiar with coke ovens than glistening In the north of the county, hawthorn and holly, which latter often attains great size and ornamental character, enrich the denes; and in many a hilly ravine the snowy blossoms of the thorn in spring, the bright coral berries of the mountain ash in autumn, and those of the holly in winter, contrast with the deep green foliage of the pine and fir. Many fine whitethorns also flourish near old mansions, and on river meadows; but within the last eighty years, quickset hedges have been generally planted, and the roads and hedge-rows of Northumberland, too, generally want the adornment and shade of trees, and are destitute of the lines of snowy blossom, that, in spring, perfume the roads in the midland and southern counties.

And now the rivers claim some notice, after detaining the reader so long amongst the hills and rocks, the minerals and forest trees. It is in the river valleys of Northumberland that its most pleasing landscapes are found, and the region of the carboniferous rocks is that in which the

picturesque beauty of its river scenery is greatest. In the central and western parts of the county the rivers generally wind through country of a bold and mountainous character. In the hilly regions of the Tyne, the Derwent, the Allen, the Coquet, and the Wansbeck, the river in many places flows under lofty banks, which rise sometimes to a considerable height, clothed to the summit with native wood; in one place some grey, weather-tinted cliff, or scar of rock tufted with trees, throws its shadow on the stream; in another, a succession of ledges of stone breaks its current into narrow rapids and murmuring falls; elsewhere, we see it leave the deep embrowning shade, for bright tranquil current, or wind through a broad shingly bed. The lover of "potamology" might revel amidst the swift rivers of Northumberland, or by the many burns and rivulets, that

With fitful sound Wafted o'er sullen moss and craggy mound,

descend through sequestered dells to join the better known historic streams, and you might listen with delight, to its dreamy carol as below some heathery bank the rivulet 'goes on for ever' in its gladsome course, with many a little cascade in the 'dimpled linn,' and many a winding in the sunshine, or beneath the shadow of purple fox-glove and pendant fern. From its rise on the eastern declivity of Cross Fell, at a spot not far from the source of the Tees, the South Tyne is but a slender rivulet, -until it has passed the dark fells at Hartside and Alston Moor, and received the Nent below Alston; thence flowing northward through the picturesque and fertile valley of Knaresdale, it is bent to its eastward course by the high border lands to the west of Haltwhistle. receives the waters of the river Allen, whose sister streams, descending from the moorlands that separate Allendale from Weardale, have flowed on the eastern and western sides of the high ridge of Allendale Common, and meet under the grey old tower of Staward Peel, in scenery hardly inferior to that of some wooded passes in the Tyrol. Although interrild moorland region, the banks of these rivers are full of ity, and the ravine that forms the course of the river, is oftenthe landscape by its deep natural wood. The North Tyne opposite extremity of the county—indeed, some of its springs ourghshire, across the border, and its native region is a disely fells; but the wild graces of Tynedale are gemmed by burns, and the North and South Tyne meet in a valley not orth-west of Hexham, and now opened to the tourist by the sties Railway, which has few rivals in the beauty of its pasooded scenery. Many a trout-stream sought by the angler se in the Cheviot Hills—many a

River to whose shallow falls Melodious birds sing madrigals.

of these is the Beamish, afterwards known as the Till, which reastern slope, in the mountainous moorlands that give birth Aln; but unlike that river, which flows eastward to the sea, sues a curiously winding course through many a bright vale, and west, round the eastern declivities of the range, and Iden Field, and the historic sites of Ford and Etal, meets the ery imposing scenery at Twizel, where the bridge, a semiof ribbed stone, presents

One bow, but great and strong,

rrey with his vanguard and artillery passed over it on the the battle of Flodden. Here, too, the gray old border tower il lately crowned the lofty rock crested with wood that still upon the stream. From its first appearance in the North-andscape, the silver Tweed, dear to archæologist and lover of que—is marked by scenery of great beauty, and it flows by castled steep," and several monuments of religion and chivalry. re crowned with many old churches and ruined towers; and ols, and the music of many a brook tempt the angler and

pedestrian to its shores. The picturesque banks of the Aln are likewish dignified by historic associations, for it passes the sites of the ruined abbeys of Hulne and Alnwick, and reflects the princely towers of Alnwick Castle. Next comes the river Coquet, which traverses some of the finest scenery in Northumberland; amid the deep woods that clothe its banks it surrounds the grey ruins of Brinkburn Priory and laves the monastic meads of Guyzance; and then the river passing the hermitage "deep hewn within a craggy cliff, and overhung with wood," which is commemorated in the well-known ballad, flows seaward, past the feuditowers of Warkworth, proud of Percy's name.

Between the Coquet and the Tyne low sandhills for the most part form the coast: but the lesser streams of the Wansbeck and the Blyth still "rush to the sea through sounding woods;" and Wallington, Morpeth, Mitford, and Bothal, mingle objects of historic interest and picturesque character, with the sylvan beauty of the Wansbeck valley.

Glancing from natural features to works of human industry, a curious contrast to these quiet streams and to the secluded wildness of the higher regions of Tynedale is presented by the noise and restless traffic on the banks of the Tyne, fourteen miles before it joins the sea. Signs of trade and manufacturing industry accumulate on either side of the river for some distance above Newcastle. There is the hydraulic-engine and ordnance factory at Elswick, lately extended, and made famous by the manufactories of the Armstrong gun; then come the older manufactories of lead and shot, and Stephenson's great locomotive engine works; and acres of workshops standing where not half a century ago were shady walks to which the citizens resorted for rural views; there, below the quays, warehouses, manufactories, and murky smoke of the town, a successsion of blast-furnaces and iron-works, ship-building yards, rope-works, coke-ovens, alkali-works, and manufactories of glass, of pottery, and firebricks meets the eye on either side of the river. Wallsend—once familiar with the eagles of Roman legions, and the raven banner of Danish seakings, is now surrounded by the smoke of furnaces and the sounds of industry. Midway between it and the sea, are the new 'Northumberland Docks;' and looking thence, across the Tyne to Jarrow, we see the other new docks (second only to the Victoria Dock in extent), which have been formed in the slake or bay where the Saxon Ecgfrid's little fleet'was wont to ride; and now, busy workshops, and a forest of masts surround the gray old church tower of the monastery at Jarrow, which Venerable Bede made so famous through the christian world. And nearer the sea, the populous towns of North and South Shields, vessels on the stocks, and a crowd of shipping afloat, wharfs, coal-staiths, piles of timber, tall chimneys pouring forth smoke, coke ovens glowing, hammers resounding, and thousands of sooty faces, mark the busy traffic, the active industry, and material riches of the Tyne.

Hardly less striking than the vast development of mining and manufacturing industry seen upon the river is the advancement of agriculture in Northumberland; and very striking is the contast between the high cultivation for which the agricultural districts of the county are now generally remarkable, and the state of natural wildness in which a great part of Northumberland remained, even within the time of living memory—a state attributable to the isolation and disturbed condition of the county, its remoteness, and the difficulty of communication from its want of roads.

With security of property and facility of communication, the era of improvement and agricultural production began, and Northumberland stood honourably foremost in adopting the improved system of agriculture which was introduced on this side of the border thirty years ago.

To glance from potatoes to population, we find that at the last census the population was returned as follow:—

Unmarried	(al	lag	•				97,356		
$\mathbf{Husbands}$			٠.						46,655
Widowers						•	•	•	5,504

Unmarrie Wives (n				•	-	•							
Widows		•	•	•	•		•	•	•	•	12,	209	
		1											154,058
										To	tal.		303,568

Of the total inhabitants, only 232,826 were returned as natives of the county. The agricultural labourers greatly exceeded the coal-miners in number.

It is in the agricultural districts generally that the Northumbrian character is the most favourably displayed. Manly independence, shrewdness, honesty, and hospitality, are the common characteristics of the peasantry; and there is many a village the very remoteness and isolation of which seem to promise that those good old-fashioned qualities will be found—a village (where as a late historian remarked), the weaver and the smith work only for the farmer; where the mill is a corn-mill only; where the ale-house is not 'licensed to let post horses,' and thetailor is not 'from London'—a place girt by small inclosures, intersected by briery lanes, and telling altogether in its aspect, that it belongs to are ancient race of yeomanry, jealous to preserve their little patrimony, and tenacious of the habits and traditions of their sires. Nevertheless, the aspect of most of the villages of Northumberland, even in the agricultural districts, excepting, perhaps, some old villages of rural districts ir the north of the county, does not be speak anything attractive or pleasing in the inhabitants, or reflect much credit on the former disposition of the land-owner. And as to the new settlements, the endearing name of villages seems hardly applicable to them, that sprang up when waste lands came to be divided; when men no longer dwelt under the protection of castles, and population increased with the advance of peaceful industry, there certainly is not anything imaginative, or (as in the case of most

old British names), descriptive of locality in the names that were given to them. Of this very modern class of appellations we have the following ridiculous examples in Northumberland:—Blink-bonny, Brandy-well Hall, Breadless-row, Clich-him-in, Cold-knuckles, Delicate Hall, Delight, Fell - him - down, Glower - o'er - him, Maccaroni, Make - me-rich, Mount Hooley, Philadelphia, Pinch-me-near, Pondicherry, Portobello, Quality-corner, Skirl-naked, Twice-brewed, Windy Nook, &c.

The agricultural villages, and the labourers' homes generally, as well as the population of agricultural districts, stand, however, in favourable contrast to the chief part of the pit-villages, (as they are called), and the mining population. Long rows and aggregations of unsightly cottages. peopled only by those who earn their living from the adjacent pits, mark too many of the colliery districts; and the cottages, especially where the property is leasehold, are generally hideous, sordid, barrack-like abodes, not indeed destitute of cleanliness and homely comfort, but totally wanting in the humanising, though humble adornments of the southern rustic No flowers grace these dwellings of dusky toil, no verdure relieves the bare cindery earth around them, no church diffuses its hallowed influence and associations; and, if we were to judge of the coal-mining population of Northumberland and Durham, by comparing their dwellings with the cottages of the mining population of Cornwall, a conclusion very unfavourable to the Northumbrian miner would be drawn; but, although the pitmen are an unpolished race, and as regards religious and secular instruction have too generally been left as uncultivated as their dialect is uncouth; they share the Northumbrian energy of character, and, where they have acquired any education at all, there are constant examples of their desire for knowledge, especially in applied sciences.

The student of folk-lore finds much to interest him in Northumberland. Many old superstitions linger among the peasantry, and in this county, as in the south-west of England, much of heathendom survives, but with the peculiarity in Northumberland, that there are traces of Scandinavian as well as of Celtic and Saxon superstitions.

The monuments of the pre-historic period in Northumberland are so numerous as to show that this part of our island must have been the scene of populous British settlements. Earth-works and encampments, stone-circles and sepulchral remains, abound in the north of the county, and occupy localities that are now mountain solitudes, and hills where now only the moor-fowl dwells among the heather. Here, as in Wiltshire, it was the high lands, and not the valleys, that were inhabited by the aboriginal people; forests seem to have overspread the vales, and the earth-works and other traces of the long residence of the Celtic tribes occupy the heights.

Northumberland preserves in many local names the traces of its former Celtic language. The British names of places were generally, as is well known, descriptive of some natural characteristic, and many of them have survived in their primitive form, or as modified by the language of the conquerors:—ex. gr.—the names of Tyne and Tweed, of Aln and Derwent, of Lindis and Low are British; and some of the names of hills in the Cheviot range, as Yewering, Steroch, and Veusheon, indicate a similar derivation. Again, the name of a spot called 'Petty-may' or 'Pity me,' which is situated among some remarkable knolls on the Watling Street, and seems to have been a place of sepulchre, is perhaps, as some one has suggested, derived from Beddan-macs—a field of graves; so too, 'Foul-play' from Foel-blac, the bald, blue hill. Most of the Roman names of stations on the wall are evidently Latinized forms of the descriptive British names, but few or no other traces of Roman speech are found in the county.

The historical monuments of the Roman period in Northumberland, consist not only of the remains of art, the military weapons, the altars and votive-tablets that have been found in once populous military stations, but of paved roads, and above all, of considerable fragments of the great barrier-wall which forms so imposing a monument of the Roman power.

Watling Street has a course of sixty-nine miles, from Pierse-bridge,

where it enters the county of Durham, to Chew-green, on the Scottish border; the intermediate stations being Binchester, Lanchester, and Ebchester, in the county of Durham; and Corbridge, Kisingham, and Rochester, in Northumberland; all, save Chew-green, being enclosed by walls of masonry, and the whole line being bordered more or less by remains of British occupation.

The most wonderful of the Roman military works in Northumberland was the barrier wall, and most imposing must have been its appearance, when, with its commanding stations, it stood in all its strength; scaling the heights of the rugged cliffs, and descending the valleys, in its course across the country from sea to sea. Portions of this great monument may still be traced through a considerable part of the line from Newcastle to Carlisle, for though it was generally resorted to as the stone-quarry for any farm-buildings in its vicinity, a line of masonry eight feet broad, and twelve feet high, has not been easy to demolish. The stations per lineam valli, which seem to have been cities on a small scale, containing, as they did, temples and baths, and buildings of a garrison, were twenty-three in number; and besides these fortified stations, there were milecastles along the whole line, with watch-towers between them on the wall.

But it is not within the scope of the present memoir to describe the wall or its stations. The question "who built the wall?" was much debated by northern antiquaries a few years since; but it is not necessary to throw upon these pages the "cold shade" of that frigid and pedantic controversy.

Of the dark interval between the departure of the Romans and the conversion of Edwin, it is of course not to be expected that any monuments can be found, unless some of the remains of British settlement already referred to should really belong to that period. The followers of Woden seem to have raised a temple to their deity at the mouth of the Aln, for a christian edifice, now in ruins, which was probably its successor, was known even down to a century ago by the name of "Woden's Church."

The ecclesiastical monuments of Northumberland have quite a peculiar It has a prominent place in the annals of the church and nation from the very earliest times, for its inhabitants were converted to christianity before those of the west of England; and in its fountains Paulinus baptised converts soon after the mission of Augustine. far-off morning of Northumbrian christianity, Aidan and Cuthbert, Oswald and Oswin, form a saintly and regal constellation; and religion, arts, and letters, were cultivated by Northumbrian monks—or perhaps by Scottish monks in Northumbrian monasteries—long before the days of Alfred, and in times when some other parts of England seem to have hardly emerged from barbarism. The Anglo-Saxon church had not a more fruitful field than this distant province, nor a period of greater historic lustre than that in which Northumberland was ruled by a monarch of its own. Sunny uplands on the slopes of Cheviot, now traversed by the lonely shepherd, were the seats of Saxon royalty; Bamburgh was the citadel of kings, and Hexham the dowry of a queen; and the site of many a parish church in Northumberland, now neglected and remote, was consecrated by its first apostles.

The Norman period was the most important era for church-building in Northumberland. A large number of its parish churches date from the twelfth century, and in many of them the actual fabric is of that period. Norman piety also rebuilt the Saxon monasteries of Hexham, Lindisfarne, and Tynemouth, and founded five other abbeys. All the monastic edifices in the county are in ruins excepting the choir and transepts of the noble abbey church of Hexham, which became the parochial church some time after the dissolution of monasteries.

We shall now pass from "general" to "particular" facts, and re-commence our progress by a description of the Capital of the North, the "Liverpool of the upper fourth of England," viz:—

NEWGASTLE-ON-TYNE,

The most important town between Leeds and Edinburgh. Newcastle is the centre of the Coal Trade, and is built upon the site of Hadrian's Roman Wall, the tracing of which has perhaps been more completely accomplished by a resident (the Rev. Dr. Bruce,) than by any other antiquarian. But to its past history we shall more particularly refer hereafter. It is a town and county in itself, a market town, and a municipal and parliamentary borough, returning two members to the House of Commons. It is the seat of a Poor Law Union, which contains eleven parishes and townships, with an area of 7,102 The population of the Union in 1851 was 89,156; in ten years Now, since the births in the decennial it had increased to 111,151. had exceeded the deaths by 8,207, but an increase of 21,995] had actually taken place, it follows that no less than 13,698 new settlers had come The brisk demand for educated labour into the town and settled there. in connection with the North Eastern Railway, the works of Messrs. Stephenson & Co., and in the Elswick Engine and Gun Factory, has contributed to this, since the visitor will notice that a new town has sprung up on the western side above the river bank. The material progress of the town may also be estimated by the fact that in 1851, the number of inhabited houses was 10,685; and that in 1861 they were 14,586 in number, an increase of about 40 per cent. If this growth were to continue, the town will have more than doubled its size in 1871, as compared with 1851. The population, indeed, is much overcrowded, and the demand for houses is therefore likely to continue. In 1851 there were on an average in each house, rather more than eight and threetenth inhabitants; whilst in 1861 there were but seven. This shows not only economical but social progress. The statistics of the population of the borough within the parliamentary limits, gives perhaps a still more

correct idea of the progress of the town from the demand for labour, at the Elswick Ordinance Works, and other important factories. In 1851, the parliamentary borough contained 10,441 inhabited houses; in 1861, 14,222; so that of the total increase of 3901 in the Union, the town contributed 3781. The population in the borough in 1851 was 87,784, and in 1861 it was 109,291, so that of the increase of 21,995 in the Union, no less than 21,507 were due to the Borough. What a contrast is here between a locality blest with trade and commerce, and a free trade in land, compared with some of those picturesque domains where the beauties of nature are in sad discord with the social, physical, and moral condition of the working classes, removed but one degree from Russian serfdom.



THE CASTLE.

For the following "chatty" notice of the antiquities of the place, we are indebted to Mr. Sidney Gibson's charming brochure on Northumberland, from which we have already quoted.

The fortress which gives its name to the town of Newcastle-upon-Tyne, may be said to have commanded the northern frontiers of England. erection is attributed to Robert Duke of Normandy, and it occupies a plateau, where probably he found some buildings of the Roman castle then in existence. The Norman stronghold before long looked down upon a rising town, to which ships resorted as in the Roman days; and in the reign of John, it had become a post of some importance, and seems to have then had some trade with Norway. Skins of beavers, sables, squirrels, martins, foxes, and goats, besides wool, were then exported from the Tyne. Under Edward I. the Norman fortress was expanded, somewhat on the plan of Conway and Carnarvon, and surrounded by walls defended by nine towers, which were called after baronies in Northumberland charged with their maintenance; but of these surrounding defences there are no remains excepting a gate tower, in which old clothes dealers have succeeded to armourers and warders. In the Scottish campaigns this castle had particular importance, and here the Kings of England often resided; but after the union its dignity departed. James I. sold it into private hands, and for a long time the Keep of the Plantagenets became a county prison, and their royal free chapel was suffered by the Newcastle municipality to be used as a beer cellar; but happily it is now the fashion to respect and preserve historical monuments, and the old castle after all its vicissitudes is in the care of the local Antiquarian Society, and appropriated to its collections and meetings. The dark frowning keep, still entire, forms an interesting example of the military architecture of the The town itself was probably walled as early as the reign Norman days. of Edward I., at all events it was then enclosed by a circuit of massive walls and gate-towers, considerable portions of which remained down to about thirty years since, when, however, the defences that had withstood time, the Scots, and the civil wars, yielded to town improvements, before whose march the many religious houses that once flourished in Newcastle have also fallen. But on the river bank, called the Sandhill, formerly, and still the merchant's quarter, there are some many storied timber houses, with over-hanging fronts and casemented windows, which have stood for perhaps three centuries. From their former inhabitants many families now received among the gentry of Northumberland have sprung. In one of these houses lived Mr. Surtees, the father of the first Lady Eldon, and from it she eloped with the future chancellor. In Sandgate -an adjacent locality-lived Scott, the prosperous yeoman, whose so William became Lord Stowell, and whose younger son John became Lord Eldon; but, although he followed the trade of a "fitter" (a sort of Cod broker) on the Tyne, he, it is said, could boast among many remote ancestors no less a person than Sir Michael Scott, the wizard, whose fame has been perpetuated by a more lawful magician. The grammar school in which these distinguished brothers were pupils, was then held in the chapel of the old hospital of St. Mary's in the Westgate (to which it had been removed when the school became a royal foundation, in the fortysecond of Queen Elizabeth,) and there Hutton was mathematical master. In the same school, Cuthbert, afterwards Admiral Lord Collingwood (also a native of Newcastle,) was educated until, at the age of eleven, he went to sea; and there Akenside not many years before received the first part of his education; but, notwithstanding its associations and the remonstrances of archæologists, the building was demolished a few years ago, for approaches to the new railway station. In the higher part of Newcastle, a new town of tall stone fronted houses—overspreading what had been the secluded garden of a Nunnery—rose about twenty-five years ago, and the new streets in many places intersect those of the old town, so that Newcastle presents a strange combination of buildings; it may be called a "surprising place for its history, trade, buildings, social economy, and smoke."

The town may be said to be built on the sides and summits of three bills, and one of its peculiarities is a deep valley or gorge called "the Dene." This, however, is gradually being obliterated, by the formation of a loop-line from Newcastle to the Blyth and Tyne Railway. Mr. Edward Glynn, one of Newcastle's unobtrusive benefactors, proposed that this remarkable spot should be converted into a public park, but like many other excellent suggestions it fell to the ground for want of support. The town extends nearly three miles on the left bank of the Tyne, which has an almost uninterrupted series of warehouses and quays upon it down to its mouth. For the major part of its improvements the town is indebted to the private enterprise, skill, and public spirit of the late Mr. Grainger, after whom one of the principal streets is named, and who, in the space of about five years, planned and constructed buildings of an estimated rental of nearly £1,000,000. The handsomest of these erections—Grey Street—stands in remarkable contrast with remains of the old town—Pilgrim Street, which runs parallel with it.



THE EXCHANGE BUILDINGS,

At the top of Grey Street is the monument to Earl Grey, 133 feet high, and on either side are some of the largest establishments of retail trade in the north of England. In the block of buildings on the right, slanting from the monument, are the Exchange Buildings, in which is a very fine semi-circular newsroom and exchange, and conveniently connected with it is the Central Exchange Hotel, conducted by Mr. Marshall, of whose liberal management and attention to visitors we can speak in high terms. It is a well-frequented commercial house, and few hotels, centrally situate, can afford to families such ample accommodation with privacy. The public dining-room extends round the corner of the street above the establishment of George Angus & Co., who are the wholesale purveyors of gutta percha goods for the district between Leeds and Glasgow.



THEATBE ROYAL.

Opposite is the establishment of Messrs. James Coxon and Co., with its gorgeous display of upholstery and materials for dress; and directly on the other side of Grey Street is the Theatre Royal, with a remarkably fine The theatre is the property of shareholders, who accept a free admission in lieu of interest, and expend the rent (£500) in improvements and repairs. The lessee, during fifteen years, is Mr. E. D. Davis, whose son, Mr. Alfred Davis, is the manager. The front of the theatre is in the Corinthian style. The lofty portico, which is forty-six feet wide, projects over the footpath, and is composed of six columns on plintles, supporting an entablature and pediment, in the tympanium of which the royal arms are beautifully carved in stone. The foundation stone of the building was laid July, 1836, and the house opened February 20, 1837; having been erected by Mr. Richard Grainger, from designs by Messrs. John and Benjamin Green, architects. The interior is conveniently constructed, and fitted up with an elegance which must be seen to be duly appreciated. The main entrance from Grey Street is by a handsome rotunda, twenty-three and a-half feet diameter, two stories in height, with a gallery upon the level of the entrance to the upper boxes, supported by richly carved stone cantilevers. Around the gallery are eight Corinthian columns, with enriched entablature, Supporting a panneled and ornamented dome, from the centre of which is Suspended a large and rich chandelier. Fronting the entrance are steps leading to the dress circle of boxes. On each side of the passage stands sculptured figures of Tragedy and Comedy. On the right, when entering the rotunda, is a spacious ante-room, or saloon, and on the left a stone staircase, leading to the upper tier of boxes. An exterior door, in Market Street, leads by a passage and corridor to the pit, which is fitted up with thirteen tier of seats covered with crimson cloth. In front of the pit is the orchestra, four and a-half feet below the floor of the stage and the pro--cessium adjoining. The gallery door is in Shakespeare Street, and also the door to the stage, which admits of being widened to ten and a-half feet. This theatre, when full, holds 1,900 persons.

Passing down Grey Street, we notice on our left Mr. Wilcke's well-known Temperance Hotel, and on our right the celebrated mourning establishment of Mr. Foreman. This place of business was for many years the



only one of its kind in the north of England; and even now, it stands without a rival in the town and district. The plate glass front surmounted by semi-circular mirrors is a remarkable and striking piece of street decoration, as our engraving testifies. Lower down is the establishment of Messrs. Reid, the jewellers; and on the opposite side, i.e., on the left, is the establishment of Mr. Wilson, bookseller and stationer, who is the





wholesale agent for Messrs. Bradbury and Evans. The principal periodicals and magazines are distributed by his wholesale agency through the district. The town is much indebted to him, in co-operation with Mr. Rea, the Town Hall organist, for some of the greatest musical treats which have been given to the inhabitants. Mr. Rea is a musician of a very high order, and has organised a choir which bids fair to rival Leslie's celebrated choir in the metropolis. Next to Messrs. Reid and Sons, is the Branch Bank of England, whose front is formed of nine Corinthian columns and two pilasters, standing upon a rusticated basement story, and supporting an entablature, finished with a double row of balustrades. The printing and engraving establishment of Messrs. M. and M. W. Lambert, and the shop of Messrs. J. and H. Harrison—where you may purchase everything, from a pin to an iron house—are on the opposite



side, and form a building, which so far as the portion above the basement is concerned, is built in a similar style to the bank. Further on is Tyne House, the extensive drapery and upholstery establishment of Mr. Waller, whose tastefully arranged windows will be certain to catch the eye and

Turning to the left along Mosley Street we leave Mr. Mawson's photoarrest the footstep of the lady visitor. graphic and drug establishment on our left, and see opposite to us the Royal Arcade, in which are the Post Office, Stamp Office, and the District Court of Bankruptcy. Passing through this we descend a flight of steps and find ourselves nearly opposite the Police Station and Magistrates' Court, behind which is the house for the Shoeblack Brigade, for which excellent institution we here pause to beg a trifle, which can be left with the Superintendent of Police across the way, or Mr. Edward Glynn who may be said "to have the command of the Brigade." Not far off on the left is the gaol, from which these boys have been kept by

Returning along the Arcade, where we have just left the visitor the invention of an employment for them. engaged in a work of charity, and proceeding up Mosley Street, we re-cross Grey Street at the top of Dean Street, and leaving Mr. Fenton's old established carpet warehouse, and Mr. Carse's hat shop on the left, go straight forward towards the open space known as St. Nicholas' Square.

Here we catch a glimpse of the New Town Hall, a building with some architectural beauties and a very handsome front. It is built so as to accommodate a certain number of shopkeepers; the bank of Messrs. Hodgkin, Barnett, and Co., and the hosiery establishment of Mr. Atkinson occupying the front. The Corn Exchange is on the ground floor, whils: above is a fine, though badly shaped, room, which will it is said seat 2,30 persons. In it is a large and excellent organ upon which Mr. Rea, the Cor poration organist, performs. The Mayor's chambers and other public office adjoin. To the south is St. Nicholas' Church. This church, an ancient a beautiful edifice, situated in the parish to which it gives name, was found



NEW TOWN HALL

in the year 1091 by Osmund, Bishop of Salisbury, Earl of Dorset, a follower of William the Conqueror. Though the presentation of this living is in the Bishop of Carlisle, the vicar claims jurisdiction over the other three parochial churches in the town, and their benefices are in his patronage. The original church was burnt down in 1216. It was rebuilt in 1359; since which period it has been frequently repaired and beautified. It is now a magnificent gothic building, the steeple of which is an object of great admiration; its architectural combinations, boldness and magnificence never fail to gratify and delight the spectator. The tower at its base is about thirty-six feet square; at the angles are octagonal buttresses, which support square buttresses terminating with brackets, above the height of the battlement, on which are placed statues of Adam, Eve, Aaron, and

David. The tower terminates with a perforated battlement; it contains clock, illuminated at night with gas, eight musical bells, and a large clockbell, fixed there in 1833, named the "Major," which weighs 8064 pounds. This bell was a gift of the late Major George Anderson. The tower was strengthened by interior walls, and iron bars, and by buttresses, from the south porch, built in 1832, when serious apprehensions were entertained that the tower inclined considerably towards the south. The north porch was built in 1834. At each angle of the tower above the battlement, rises an elegant octagonal turret with crooked pinnacles and a lofty vane: from the base of these spring two splendid stone arches, intersecting at twenty-four feet above the battlements; they support a very elegant, lofty, square lantern with angular pinnacles, surrounded by a well proportioned and crocketted spire, crowned by a light vane. From the ground to the top of the battlement the height is 117 feet nine inches, and the full height is 1933 feet. The interior of the nave, or outer church, is 109 feet by seventy four feet two inches. The length of the choir, including the organ gallery, is 136 feet, making the total length of the interior 245 feet from east to west. The choir is sixty four feet wide, and the full inside width at the transepts is 128 feet eight inches. The present interior arrangement, in the cathedral style, was effected in 1787, at a cost of £2000, when the service was removed from the west end. The organ was erected in 1676, and in its present improved state is a noble and powerful instrument, having cost upwards of £1000. The frame work is of mahogany and highly ornamented. The font is a plain octagonalshaped marble vase, supported by a fluted stone column, with a beautiful canopy of carved wood-work suspended over the same, and is now hung from the centre of the groined arch at the west entrance. A valuable painting, by "Tintoretto," was presented to this church by Sir Matthew White Ridley, bart., in 1818; the subject of it is, Jesus washing the feet of his disciples. The east window is a memorial of the late Dr. Ions, organist of the church, a beautiful window by Gibson is placed in the south transept, and there are memorial windows of the late James Dale and Jos. Garnett, Esqs. The church contains several fine specimens of sculpture, and a great variety of sepulchre monuments, which will amply repay a careful inspection. The vestry of St. Nicholas' Church is entered from the south side of the choir; also from the staircase leading to Dr. Thomlinson's Library, and St Nicholas' Library, on the south side of St. Nicholas' Church Yard. The building was erected in 1736 for the books of Dr. Thomlinson's Library, in which are many valuable and curious works, and is open to the public gratuitously from ten to twelve o'clock, every working day.

Leaving St. Nicholas' church, the visitor may continue his walk southwards under the High Level Bridge, the construction of which he will thus be enabled best to understand. The Bridge is one of the most astonishing structures, perhaps, in England; being actually a double bridge, consisting of a bridge for carriages, horses, and foot passengers. at the height of 85 feet 101 inches above high water mark; and a railway bridge at a further height of 22 feet 71 inches. The railway at each end of the bridge, forms a curve, and unites the present railways on the south of the Tyne with those on the north; to effect this, an immense expense has been incurred, in the purchase of properties, and in forming viaducts through the centre of Newcastle and Gateshead, to the extent of nearly one mile and a half, and at a cost of about a million of money. The Bridge consists of four water arches, and two land arches, each 124 feet 10 inches span, and 138 feet 10 inches from centre to centre of piers; the width of carriage road is 35 feet 1 inch, and 44 feet 10 inches outside width of piers. The arches are formed of iron, and the piers of solid ashlar stone; the entire height of masonry and iron work, from the bed of the river to the parapet of the railway, being 132 feet 6 inches; and the length of the bridge for carriages, horses, and foot passengers, from the north to the south entrance is upwards of a quarter of a mile. It has been estimated that the iron work in the structure

weighs nearly 5,000 tons. The mason work in and over the river cost about a hundred thousand pounds; the mason and brick work of the land arches about an equal sum. At a meeting of the railway company, June 1st, 1849, it was stated that the total cost had then amounted to £356,153, which included £113,057 for the viaducts, in connection with bridges, over Gateshead and Newcastle. The land, buildings, &c., is stated to have cost £135,000 additional; amounting in all to £291,233. The completion of the last arch was celebrated June 7th, 1849; the first pile baving been driven April 24th, 1846. The bridge for the conveyance of trains was opened August 15th, 1849, and the bridge for carriages and foot-passengers, February 4th, 1850. This stupenduous bridge will stand for ages a monument of enterprize, skill, and beauty, exhibiting to all what union can accomplish. The union of the railway companies, in the neighbourhood of Newcastle, have erected this magnificent bridge.

Returning towards the church the visitor will notice the castle, which is considered the finest specimen of Norman castellated buildings in England, having been erected in 1080, by Robert Curthose, eldest son of William the Conqueror. It was formerly surrounded by two walls, strong and high, enclosing an area of 3 acres 1 rood. The history of the castle, subsequent to its erection, does not possess striking interest. the 26th December, 1292, John Baliol did homage for his Scottish Crown, to King Edward I., in the great hall; and in 1620, the castle being then the county goal, is reported to have been in a most dilapidated For a long time after the castle seems to have been held on lease from the crown by various individuals; but, in 1808, it was purchased, as a freehold, by John Turner, Esq., of London, who, in 1809, contracted to sell it to the Corporation of Newcastle, for 600 guineas. At this time it was in a state of real dilapidation. The Corporation, in coming into possession in 1812, instantly set about the repair of the fortress, and continued to preserve it in that state; in 1848 they granted a lease of the castle, at the nominal rent of 2s. 6d. per annum, to the Antiquarian Society,

who, with the consent and assistance of the Corporation, have already effected a restoration of many parts of the building to its original style and character.

The height of the castle, to the top of the battlement on the roof is 83 feet; and the extreme height of the battlement tower is 105 feet. The exterior walls are 14 feet thick at the top, and 17 feet at the bottom, with chambers within them. An outside stair, at the south-east corner, leads to the oratory and great hall on the second floor, the size of which is 30 feet 5 inches by 23 feet 10 inches, and 41 feet high; out of which on the south side, a door leads to the "King's Chamber," and in the west wall is another apartment; also a passage, the entrance to which is from the King's Chamber. There is another apartment in the hexagonal tower, entered by a few steps from the sill of the north window, which was used as a magazine for powder, but is now shut up. In the north-east angle is the well room, with a recess, where is situated the draw-well, 96 feet deep. In the east wall there is a narrow staircase. which connects the newer staircases, in the south-east and north-east angles of the building; these lead to a continued gallery, within the walls, about 17 feet from the top of the keep.

On the first floor is the common hall, 28 feet 7 inches by 22 feet 3 inches, with a stone pillar in the centre, 4 feet 9 inches in circumference, from which springs the stone arch which forms the roof. These are modern alterations; as is also the present doorway entrance, on the east, which was formerly an apartment. The original entrance to this hall, was by steps from the staircase to the window aperture, and from thence to the hall. There is a mural chamber in the north wall; and in the north-west corner is a narrow passage and staircase, which lead to the floor below; the window adjoining is a modern alteration, broken out through a small apartment, which was entered by the passage in the north-west corner. East of the main staircase is a small guard of to defend the door of the chapel.

On the ground floor is a large room called the dungeon, 27 feet by N feet 9 inches, with a stone pillar in the centre, 7 feet 6 inches in circumference, from which springs the vaulted roof. There is a mural chamber in the north wall, from the west angle of which is seen the narrow stairces. leading to the chamber on the floor above. Near the south-west cortain of the west wall, is another chamber, the passage of which was from window sill adjoining, but is now walled up. From this chamber is entrance into a narrow space on the north, lighted from the west winds Between the south door to the castle and the dungeon, is a passage to main spiral staircase. At the fourth step is an entrance to a dark rotal leading into the chapel; the first apartment of which, from north to soul is 17 feet 2 inches, by 13 feet 10 inches wide, and the inner apartment of chancel, from north to south, 12 feet by 18 feet 9 inches; total length from north to south, 31 feet; the south porch is 12 feet by 7 feet 11. inches.

East of the castle is the Castle Garth Stairs, where is still remains a postern, through a vestige of one of the outer walls which surrounded keep. From the top to the bottom of this zig-zag precipitous flight stairs, old houses and shops line both sides; the windows and which are stocked with boots and shoes of all sorts and sizes, with shops for the sale of old clothes. At the top of the stairs looking to the castle are the Moot Hall Courts, where the county justices sit, with the Northumberland assizes are held.

Repassing the church, the visitor should turn along Collingwood Street, at the end of which, on the left is the antiquated building, known as Neville Hall, occupied by the College of Medicine, the Coal Trade Association, and the North of England Institute of Mining Engineers; and here turning round he will see Mr. Pape's new gun shop. Mr. Pape's guns are known throughout the world; and instruments of his manufacture did their duty in the corps of Garibaldi. Directly opposite is the Literary and Philosophical Institution, which comprises a splendid library and reading rooms, also a fine



lecture room. It was established by the Rev. Mr. Turner, and others, but has been munificently endowed subsequently by the two Stephensons and Sir W. G. Armstrong. There are some fine busts in the reading room and a museum rich in specimens is attached.

On the triangular piece of ground formed by the junction of Neville Street and Westgate is a monument, by Lough, of George Stephenson. This handsome memorial of Stephenson's genius and fame was erected by public subscription, and inaugurated on the 2nd October, 1862, Lord Ravensworth delivering the inaugural address.



THE STEPHENSON MONUMENT.

The New Markets occupying a rectangle formed by Grainger Street Nelson Street, Clayton Street and Nuns Street, form another of the erection for which the town is indebted to Mr. Grainger. In extent, accommodation, and elegance, and in ventilation and general design, these market excel anything of the kind in Great Britain, and probably in the civilis

The site on which they stand is oblong, and measures 337 feet 3 world. inches by 241 feet 3 inches, containing 9,047 square yards, or 1 acre, 3 roods, and 2 perches. The whole is roofed over, and surrounded on all The Butcher Market contains 166 shops, sides with lofty buildings. fronting into four ceiled avenues, 316 feet 6 inches long, 19 feet in width, and 26 feet 9 inches in height; and also into four transverse avenues, or arcades, 11 feet 10 inches in width, and 23 feet 4 inches high. whole is lighted and ventilated by 360 sash windows, and fifty sky lights in the ceiling of the east avenue. The Green Market contains fifty-four shops, surrounding an area of 316 feet 6 inches in length, by 56 feet 6 inches wide. The roof of this spacious and lofty market is elegantly framed in the cathedral style; being supported by thirty cast-iron pillars, each 26 feet 6 inches high, formed in two rows. The light is admitted from a glazed lantern in the roof, containing 150 windows, and 104 sash windows in the side walls. The entrances from each end have elegant framed roof lights to a recess formed in the building, where, at the north entrance is placed a clock, and at the south, the arms of the town in sculpture. Two nest and spacious stone fountains are placed in the centre of this market, in a line with the side entrances to the market. the fountains, on each side of the centre of this market, are ranges of castiron stages, with tiers of lofty elevated shelves for the display of goods exhibited for sale, while tables and forms are placed between them and the vegetable shops. In the space north and south of these fountains are placed tables and forms for the sale of poultry, butter, eggs, and a variety of other commodities.

Beyond the central railway station, and a little to the west is the Newcastle Infirmary,—an extensive and most valuable institution, with which is connected the Medical School at Neville Hall. Beside it, on the north and west, are the markets for cattle.

On the north side of the town is the Town Moor and the Castle Leazes. To the east is the beautiful new building erected for the Northern Institution for the deaf and dumb.

hangs up his various keys. On any key being removed, a small counter-balance weight or bolt drops down and remains down until the key is replaced. This bolt effectually prevents the closing of the case. If, then, the person should forget to replace the key which has been removed, he is immediately reminded of it by being unable to close the case. The principle and contrivances are applicable to many various arrangements of drawers and partitions." The firm also manufacture geological models (designed by Mr. Sopwith, and which gained for him the Telford Medal of the Institution of Civil Engineers of London), improved levelling staves for surveying ground, and rulers for isometrical drawing, on which last named subject Mr. Sopwith has published a bulky volume.



The show rooms of the firm are in Northumberland Street, as shown in our engraving, and contain a stock of magnificent and costly furniture and upholstery, which is without an equal in the northern counties. Facing the Haymarket is the neat little shop of Mr. Eoston, ironmonger and hardwareman, where nearly every article of household use seems to be stored, from a carpet tack to a patent mangle, from a scrubbing brush to a washing machine.



Messrs. Atkinson and Philipson's carriage and harness manufactory in Pilgrim Street, is also a place of great interest to the stranger, and many stop as they pass through the town by rail, for the purpose of inspecting this interesting manufactory and show-rooms.

We have pleasure in giving an engraving of these extensive works, and extracting the following remarks from a local journal.

"Newcastle possesses one of the largest coach manufactories in the kingdom. This establishment, which commenced about seventy years ago, is situated on the east side of Pilgrim Street, and is the property of Messrs-Atkinson and Philipson, a firm whose standing and reputation, in this peculiar department, are proverbial throughout the country.

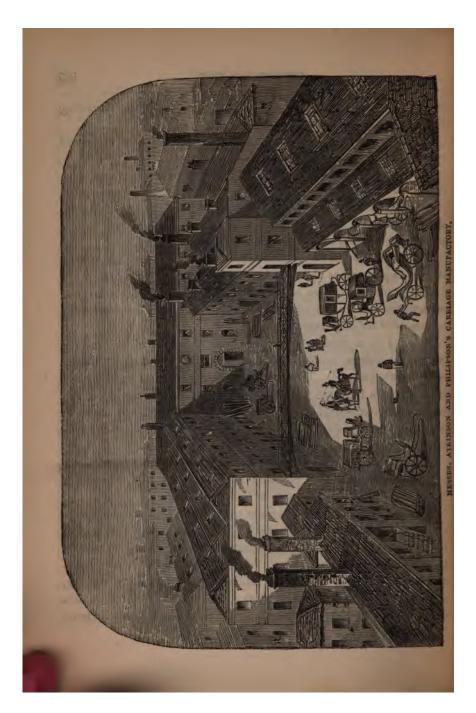
This manufactory is surpassingly interesting to the visitor; affording as it does, employment to above one hundred and fifty men and boys.

The premises have been rebuilt within the last twenty-five years, and are arranged in a manner admirably adapted for the varied and extensive operations of the proprietors.

Entering by a spacious court, the visitor is conducted to two long ranges of buildings, running east and west, and connected by a cross section at the east end. The north side measures 180 feet long by 60, and is three stories high; the east or cross section, 100 feet long by 30, and is also three stories high; the south 280 feet by 60, and both the north and south sides are joined in the centre by a high level bridge, which facilitates the communication between the different departments.

The machinery is in itself of no common interest, and is calculated to be equal to the labour of fifty men, as it is adapted to wheel-making, sawing out and shaping the wood for bodies, &c.

The smiths' shops are very extensive and well arranged, and unlike most coach-makers, Messrs. Atkinson and Philipson manufacture every part of the ironwork required for their carriages, including patent axle-trees, springs, &c., on the premises. In this department are to be seen lathes on the most improved construction; drilling, screwing, punching, clipping, grinding, and other machines; and this, independent of the others, is a department of considerable importance. There are also furnaces for heat-



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the spring plates, for tempering and case-hardening axles, &c. All furnaces are worked with a fan-blast, and the whole is driven by the power.

According our inspection of the south buildings, we reach the upper there, in which is a Show-room 130 feet by 60, always containing fifty to the same floor is a pointing room of similar dimensions; passing through which we enter the harness and trimmers' room, in which upwards of twenty men are working. All these lofts are heated in winter by hot-water pipes, to a comfortable temperature.

The north side of the works is appropriated to the building of carriages, and the standage of nearly 100 second-hand carriages.

A very large stock of timber is requisite for such an establishment, and the timber yards are outside the manufactory, in two separate situations, where the material is cut into planks, and arranged in large tiers; all the various kinds being separated; such as mahogany, oak, ash, elm, &c., where it has to remain several years, before it is properly seasoned. It is then taken into the manufactory to the saw mills, and cut up for the various purposes for which it is adapted.

We might particularize, did our limits permit, some other features of this establishment, but the above outline will indicate the operations of the principal departments. In short, the entire establishment, whether as regards extent, completeness of machinery, or methodical arrangements, fully equals the deservedly great reputation it has acquired, as a coach and harness manufactory."

We can most cordially join in the above remarks, and feel, while a visit to the manufactory must be interesting, that an inspection of the large and valuable stock of carriages and harness (which is without an equal in the north of England), is of importance to those requiring anything in this branch of business.

Of course it would be totally impossible in the compass of a work like

this to notice all the buildings and places of interest in Newcastle, which, with its neighbourhood is replete with attractions. There are lovely walks about the town, and romantic scenery within reach. There are places of worship for all sects, and the intellectual amusements of the locality are of a high class, and follow rapidly upon each other.

We had almost forgotten to mention—and it would have been an unpardonable omission—that Newcastle is celebrated for its ales—native and For the latter, the visitor, on arriving at the Central Station, imported. may step across the road to Mr. Reid's warehouse, where he can lay in a stock of "Melvin's Edinburgh," for consumption as he whirls along, south, west, or north, as the case may be. But if he desire to partake of the real "Newcastle brew," he may walk down the Quayside as far as the Type Brewery, of which the kindness of the proprietors enables us to give an engraving, where the intelligent manager will introduce him to the Strong Ale, Mild Ale, the India Pale, the Porter, and other varieties of the beverage for which the brewery, in its career of a century and a-half, has become justly celebrated. It must have been the Tyne brewery ale that the local rhymer had in view—shall we say in hand?—when he wrote or sung-

"The cockneys may boast of their porter's fame;
And deem their stout divine;
But they never can claim the glorious name
Of th' ale on the banks of the Tyne;
Like that fine stream, clear, old, and good;
'Twas never known to fail;
And kings have enriched their noble blood
By draughts of Newcastle ale."

The trade, especially in coal, iron, and chemicals, has enormously increased within the last ten years. During the year 1861, the exportation of coals and coke alone from the port of Newcastle was, foreign, 1,916,588 tons of coal and 128,713 tons of coke; coastwise, 2,345,017 tons of J and 20,972 tons of coke—an aggregate export of above four and





a-half millions tons of coal, and nearly 150,000 tons of coke. At the time we pen these lines there are great improvements being made in the river, to accommodate the increasing river traffic, In fact everything seems to promise that the extraordinary growth which Newcastle has witnessed in the last decenniad will be more than repeated in the present.

Leaving the "county toon" with its verious edventages and drawbacks.

Leaving the "canny toon," with its various advantages and drawbacks, beauties and deformities, we shall now return and review the various branch lines on either side of the main route between

THIRSK AND NEWCASTLE.

The first of these is the deviation from Northallerton, on the west or left of the line which runs by way of Ainderby, Bedale, and Newton-le-Willows to Leyburn, which we shall call the

BEDALE AND LEYBURN LINE.

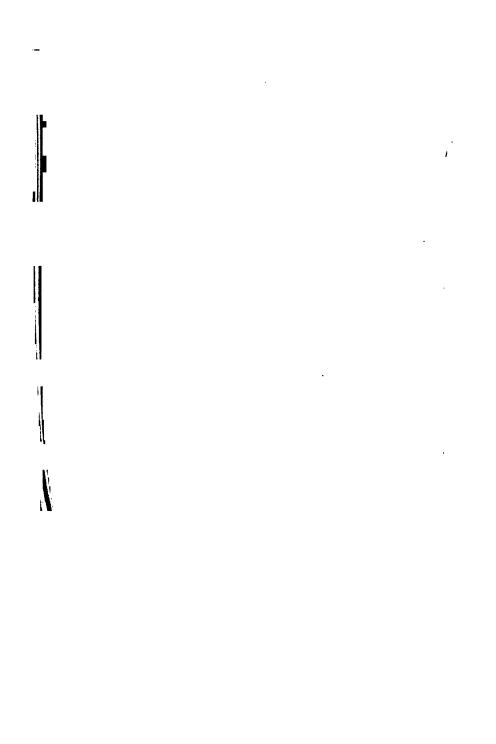
AINDERBY is an unimportant little township, containing in 1851, 323 inhabitants. A few miles further are Scruton, then Leeming Lane, and the next station is

BEDALE,

A market town of some importance, surrounded by a rich agricultural district. It is the seat of a Poor Law Union, the district of which in 1851 contained 8,980 inhabitants, but that number had slightly decreased in 1861, when the inhabitants numbered 8,650.

The town is tolerably well built, situate in a rich valley on the Bedale Beck; it is thirty-four miles from York, and 223 from London. The beautiful church of St. Gregory dates back to the reign of the third Edward. There is a Grammar School in the town; and there are numerous bequests to the poor. The tower of the church, which is worth notice, has been used as a fortress.

Passing Crakehall, we arrive at Newton-le-Willows, return to the



main line at Northallerton, and trace the line which runs to Yarm and Stockton-on-Tees on the north, and to Stokesley and Castleton on the east.

NORTHALLERTON TO STOCKTON-ON-TEES.

At about a mile distant from the Northallerton station we come to Brompton, and four miles further on we pass Welbury. These places are unimportant, but are situate within sight of the Cleveland Hills, whence some of the finest ironstone is obtained. Further on we cross the river Wiske, and arrive at Picton Junction, where the line for Stokesley branches off to the right. At a distance of twelve miles from Northallerton, and three from Picton Junction, we come to

YARM;

A pretty town on the river Tees, over which there is an old Gothic bridge, with five arches. It has several times been inundated; the water having been in 1771 as high as twenty feet in the houses. There is a paper mill, and more than one flour mill; but the employment of the people is chiefly in shops which supply the agriculturists in the vicinity. There is a great cheese fair here on the 19th of October.

Passing forward we re-enter Durham, pass the Preston Junction of the Darlington line, and Eaglescliffe; and presently, after crossing the estuary of the Tees, and leaving South Stockton on the left, we arrive at

STOCKTON-ON-TEES.

An important market town, seaport, municipal and parliamentary borough, and the seat of a Poor Law Union. The district of the latter contained in 1851, 36,865 inhabitants, which had grown to no less than 57,183 in 1861; 20,266 persons having been added during that period, some of course by immigration from places where wages were less remunerative.

The principal street is broad, and about a mile long; unfortunately it is in part by the old town hall and the new shambles, which

should have been put somewhere else. At the south end of High Street the road crosses a stone bridge of five arches and proceeds over the Tees to South Stockton, a large and rising suburb. The houses, for the most part, are of brick, and exhibit considerable regularity in appearance. Stockton possesses a spacious town hall, a custom house, assembly rooms, billiard rooms, and a small theatre.

The principal manufacture is that of sail cloth; but ship building, and the related trades flourish. Foundries of brass and iron, breweries and corn mills also find employment for the inhabitants. The navigation of the river has been improved, and a large area of land reclaimed by cutting a new channel across the horse-shoe bend of the river. Considerable export and import trade is done in the harbour; though Middlesborough is said to have somewhat interfered with the natural growth of the trade. We have pleasant remembrances of Stockton and are bound to speak highly of its genial hospitality. There are pleasant walks in the vicinity, and to the visitor we recommend the exploration of the district between Stockton and West Hartlepool by way of Saltholme, Greatham, and Seaton Carew.

The line which connects the town with Darlington is the oldest, and one of the most successful in the world. Within reach of Stockton are many places of great interest, and prominent among them the works of Messrs Bolckow and Vaughan.

We now must return to

PICTON JUNCTION,

And trace the line westward to Castleton, in the direction of Whitby, going due east. Passing TRENHOLME BAR, POTTO, and SEXHOW as unimportant stations, we arrive at

STOKESLEY,

The residence of a poet of considerable ability, who will be found dis-

pensing to the neighbourhood their supplies of daily and weekly literature. Mr. Tweddle is a pleasant companion when he can spare the time; and the visitor to Cleveland should try to tempt him to a pedestrian exploration of the vicinity. We know of few walks which remain associated with such delightful memories as one we took in company with some very dear friends, among the hills northwards, in the direction of Guisborough. Rich agricultural scenery, with here and there the indications of an ironmine in the mountain sides met the eye, and objects of peculiar interest were plentiful by the way. In Stokesley itself, we found some curious grave-stones in the church-yard, and were shown the deserted printing office from whence cheap literature was once issued from Stokesley. The population of Stokesley Union in 1851 was 9,387; and in 1861 it reached 10,381, an increase of nearly a thousand.

On the south side of the town is a remarkably fine trout stream, which would have delighted Izaak Walton, who would have

"Watched the feathered fly,
Midst scenes whose beauty tempts the ravished eye."

For Stokesley is the centre point of the semi-circular amphitheatre formed by the Cleveland Hills. We strolled along the road by way of Marton and found the house where Captain Cook, the great English navigator, was born, and spent the first years of his life. On the hill-side, above the village, is an obelisk, which commemorates the fact. Following the lower road, we arrived at a pleasant village inn, beneath the shadow of Roseberry Topping; of this hill we made the ascent on one of the most beautiful days we can remember. The scenery was magnificent beyond expectation.

INGLEBY, KILDALE, and CASTLETON are the remaining towns on the line we have been describing, but they are unimportant. There is, however, a branch line to Three Hoes, in the neighbourhood of which is Rosedale Abbey, which deserves a visit if leisure permit.

We now return again to the MAIN LINE, and having proceeded from

Northallerton to Dalton Junction, we trace the branch line by Moulton, Scorton, and Catterick, to

RICHMOND,

Which gave to Henry VII. the title which he bore on the scene where Richard is said to have cried "Methinks there be six Richmonds in the field—a horse! a horse! my kingdom for a horse!" It is a borough returning two members to parliament. The population in 1851 numbered 13,846, in 1861 it numbered 13,456.

Alan Rufus, a kinsman of the Norman conqueror William, obtained from his chief the title and lands of Richmond; these possessions fell to the Crown on Henry's victory on Bosworth Field. Charles II. bestowed the title on his son Charles Lennox, in whose descendants the dignity continues. Alan Rufus built the square keep of the castle 100 feet high with walls eleven feet thick. The situation is most picturesque, on a precipice which frowns over the river. The walks around the castle present a succession of varied and romantic scenery. The railway station and bridge over the Swale are very handsome structures. The parish church is Gothic with portions of Norman architecture. There is a Scientific Society with a good library, a Mechanics' Institute, and a wellendowed Grammar School. The town and neighbourhood are inhabited chiefly by the gentry and well to do families, who form the principal support of the tradespeople of the town; the only manufacturing employment being the institution so much condemned by Jack Cade, who considered it a crime to have built a paper mill. In the vicinity are the fells and water-falls which give fame to Swaledale and The visitor should also endeavour to inspect Aske Hall, the beautiful seat of the Earl of Zetland.

Returning once again to the MAIN LINE we proceed northwards, through DARLINGTON (leaving Darlington and Stockton lines for a separate handbook), to LEAMSIDE, from whence we trace the

BRANCH TO DURHAM.

The "city set on a hill" will have been previously noticed from the main line, and is a fine object in the scenery for many miles around.

This city, like ancient Rome, is built on seven hills; and here it is said the monks rested with the remains of St. Cuthbert after the Danish invasion, and, according to the legend of that time, its name was Dunholme, from the kingdom of Dura, in which it was situated. It is near the centre of the county, in latitude 54° 5" and 1° 27" west longitude



DURHAM CATHEDRAL.

from London. From whatever quarter a stranger approaches this town, he must be at once impressed by its imposing situation, and the grand effect of some of its buildings. In the centre are the Cathedral and Castle -the tower of the former has been recently restored under the direction of G. G. Scott, Esq., the eminent Gothic architect, and the keep of the latter, which had been for a long time in ruins, has, under the superintendence of A. Salvin, Esq., F.S.A., &c., equally distinguished for his skill in Gothic architecture, assumed its present renovated appearance. and is now occupied by the University. The two streets called the Baileys, skirted by hanging gardens and plantations inclosed by the ancient walls of the city, descend to the river Wear, which, in its course forms the figure of a horse-shoe; and on its opposite side are high and rocky banks studded over with trees, and along a portion of which extends the street of New Elvet, terminated by the Church of St. Oswald's. From Elvet Bridge runs Old Elvet, at the top of which stands the County Prison and the Roman Catholic Chapel. Crossing Elvet Bridge you reach the Market Place, where stood an ancient pant, but it has lately been removed to make way for a new one of more elegant form. The Market Square is very much confined; but of late years a great improvement has been effected by the construction of the new markets—the rebuilding of the Town Hall from the designs of P. C. Hardwick, Esq., of London, and the Church of St. Nicholas from those of Messrs. Pritchard and Middleton of Darlington, and the erection of an equestrian statue of the late Marquis of Londonderry. An excellent house for tourists is the County, late Ward's Waterloo Hotel, in Old Elvet. In New Elvet, the old established firm of Tiplady and Sons, tailors, carry on a large and fashionable business. Market Place and Saddler Street, the leading shops are situated. the opposite corner to Saddler Street, the eastern hill is climbed by the streets of Claypath and Gilesgate, the Church of St. Giles being beautifully situated, and commanding a most extensive view of "Pelaw" and "Maiden Castle" Woods, the surrounding country and the whole of the city.

From the south-west corner of the Market Place, Silver Street slopes down to the celebrated old Framwellgate Bridge, built by Bishop Flambard between 1120 and 1128. This bridge has been recently repaired and considerably widened. From its northern end branch, in different directions, the streets of South Street, Crossgate, Framwellgate, and the New North Road, by which, after climbing a steep hill, the Railway Station is reached. From South Street, on the opposite bank, the Cathedral in all its grandeur of outline, the old Castle on one side and the collegiate buildings on the other, with the river winding round the base crossed by the Prebends and Framwellgate bridges, form altogether a varied and picturesque panorama, and which is described by Rickman in his book on Gothic architecture as unequalled.

In Crossgate stands St. Margaret's Chapel, a plain and unpretending Gothic building. About a mile from the top of this street, on the road to Witton Gilbert, stands a small stone cross to commemorate the battle of Neville's Cross, fought on the 13th of October, 1346—the English forces being commanded by Queen Philippa during Edward the Third's absence in France. In this engagement different sections of the English army, were led by the Bishops of Durham, Carlisle, Lincoln, and the Archbishops of York and Canterbury; the Scots were completely defeated, and their king, David the Second, taken prisoner. The hillock called the Maiden's Bower, where St. Cuthbert's banner was displayed, and where the monks offered up their prayers to Heaven within hearing of the conflict, where the battle was (truly) "with tumult and garments rolled in blood," is yet to be seen in the depth of the valley by the edges of Shaw Wood.

Framwellgate consists of one long irregular street leading from the bridge to Newcastle. Near the turnpike road stands Dryburn, the seat.

L. Wharton, Esq., one of the greatest benefactors of the neighbourMr. Wharton has within the last year or two thrown open his

ark for the use of the public, and erected therein all manner of

conveniences. In these grounds are held annually "the Dryburn Fetes," where for some days all sorts of old English sports are practised. the city of Durham and its vicinity the visitor will find many objects of picturesque beauty and antiquarian interest; amongst which may be enumerated—Finchale Priory, St. Cuthbert's Chapel, Ushaw, Kepier Monastic Buildings, St. Cuthbert's Fountain in the Banks, the ruins of Beaurepaire, or Bearpark, Magdalene Chapel, the Observatory, and Lord Durham's Monument on Pensher Hill. Of these the most remarkable is the Catholic College at Ushaw, where a religious colony may be said to have been established. Here the visitor may wander through a mile of corridors, and visit some of the most exquisite chapel-ets we ever saw. No expense has been spared to decorate the altar, or render the services impressive, and we were told that "there was not a minute, by night or day, during which the voice of prayer does not ascend from the fourteen churches and chapels at Ushaw." The library, refectory and other rooms are well-worth a visit; and the greatest courtesy is shown to strangers who bring an introduction. The whole estate belongs to the college and is very extensive. The grounds attached to the building are laid out with taste, and adjoining are very large play-grounds, cricket-grounds, gymnastic park, and racket-courts. Nearly all the articles consumed in the college are raised upon the farms, where the students have the opportunity of practically learning agriculture. This is considered important for those who are likely to be engaged in foreign missions. and extension of Ushaw College is principally due to the exertions of the late Rev. Dr. Newsham.

BISHOP AUCKLAND.

On leaving Durham in a south-western direction, you take the line to Auckland, on which the first station is Brancepeth, where is situated the magnificent castle, the seat of the Hon. Hamilton Russell, Viscount Boyne. The old church is also an object of peculiar interest as a paro-

chial structure, in its arrangement and decoration. By railway, Bishop Auckland (deriving its name from the palace of the bishops) is 10½ miles from Durham; the station standing at the end of a long street, named Newgate street, you have, as it were, to turn back again to get into the town. The market-place is a fine open space, which until recently was disfigured by a most ugly modern market-cross. This has now been taken down, and a new Town Hall erected from the design of a London architect, but carried out under the direction of Mr. Johnstone, architect of the new Town Hall, Newcastle-upon-Tyne. Several old houses adjoining the Chapel of Ease were purchased by a local company, and cleared away, and on their site the Town Hall was built. Since this improvement was effected all corn brought to this market has been toll-free. Opposite to the Chapel of Ease is the Barrington School, built and endowed by Shute Barrington, during his episcopate. In the Market Place are found the principal commercial and other hotels. shops, &c.

At one end of the Market Place is a modern built gateway, through which is Auckland Castle—an irregular pile built at different periods, with no part left of any antiquity. Some of the rooms are of large dimensions, particularly the dining room, whose walls are ornamented with fine oil paintings of Jacob and his twelve sons, said to be painted by Zucchero. The chapel connected with the castle was built by Bishop Cosins; the length is 80 feet, the breadth 48 feet. The subject of the altar piece is the resurrection, painted by Reynolds. The exterior is of rather elegant design, being ornamented with numerous pinnacles. The castle is situated in a beautiful and extensive park, through which the river Gaunless meanders and falls into the Wear. The park is well planted, abounding with delightful walks; but since the reduction of the see, the deer, which added variety to the scenery, have been sold "to save expense."

The ground on which this town and castle are built is of an angular form, the streets forming the sides, and terminating in the apex at the castle. Of late years this town and neighbourhood have much increased in population and trade, by the opening out of collieries in its immediate vicinity, but which, to a certain extent, have destroyed the verdant vales and cultivated lands of the surrounding country; and to it can no longer be applied the lines of Bishop Trevor's domestic—

Now would my muse a thousand beauties paint, A thousand noble views that strike the eye. Where wood and water blended, form a scene Of excellence.

We shall now return to the MAIN LINE once again, and starting from Learnside trace the

SUNDERLAND BRANCH

Which really deviates at Pensher Junction, but for which the carriage arrangements are made at Leamside. Passing Fence Houses, we turn to the right, or eastward, and leaving Cox Green, Hylton, Pallion, and Millfield, we come to Hendon Junction with the line from Hartlepool. A coast line also lies in the same direction, belonging to the Marchioness of Londonderry, whose public levees with her tenantry and work-people have made her justly-respected and well-known. Seaham Harbour is the centre of her colliery property, over which Mr. Elliott, a gentleman of very great ability and influence is the "viewer." A few miles to the north of Hendon, is the town and port of

SUNDERLAND

At the mouth of the river Wear, a place remarkable in many respects for its past history, and present condition. Turning to the social barometer, which affords so good a test of the state of the people, we learn that the population of the Union (area 11,944 acres, containing eleven parishes and townships) in 1851 was 70,576; in the decenniad it had added 20,091 to its numbers, so that in 1861 the inhabitants were 90,667. To account for this extraordinary increase it is clear that immigration must have

brought not less than 6,754 new settlers into the place, since the excess of births over deaths only gives an increase of the natives amounting to 13,337. Despite all the exclamations about depression in the shipping interest, it is thus demonstrated that the labour-market in Sunderland is brisk.

Sunderland is 302 miles from London, thirteen from Durham, and ten from Newcastle. It returns two members to parliament. The celebrated "Railway King" was formerly one of its representatives, and had many claims upon the gratitude of the town, in consequence of the interest he took in promoting public works, which have partly made Sunderland what it now is. But Mr. Hudson's Conservative principles were not in harmony with the opinions of the voters, and he was therefore ousted to make room for Mr. W. S. Lindsay, whose name as a political ship-owner and free-trader is known all over the commercial world. The town may be said to extend upon both sides of the river, the section on the north bank being called Monkwearmouth—that to the south Bishopwearmouth.

Near to the station is the People's Park, very prettily laid out and divided into two enclosures by the Stockton road. The entrances, &c., were designed by Mr. Crozier, the local engineer, whose name is better known as that of the inventor of a useful street hydrant. There is an extensive view from the park, and no one should go to Sunderland without paying it a visit. Russian guns captured at Sebastopol, and a splendid monument to General Havelock, who was a native of the place, are in the grounds. Turning towards the town, from the park, we enter Fawcett Street, in which are situated the Athenæum, a large building in the Ionic style; and on the same side, the large and handsomely fitted Queen's Hotel, conducted by Mr. Shiel. In 1861 Mr. Shiel greatly extended his premises, so as to constitute the "Queen's" a first-class hotel is involved him in a law-suit with the Local Board of Health, and after

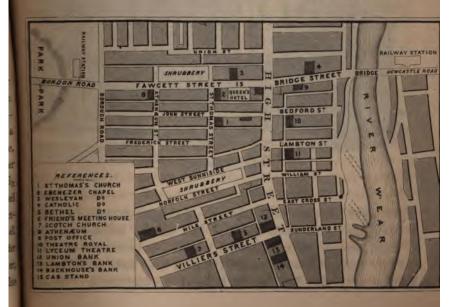
involved him in a law-suit with the Local Board of Health, and after en months litigation, an appeal was made to the Court of Exchequer, we a verdict in favour of "our host." In the same street are also



COMMERCIAL & FAMILY HOTEL,

FAWGETT ST BUNDERLAND.

GEORGE SHIEL PROPRIETOR.





Wesleyan Chapel and the Ebenczer Congregational place of worship.

SS Walton's Temperance Hotel is on the western side. A little

yond we come to "four cross roads" formed by Fawcett Street, (along
nich the visitor has come from the station to the Park,) Bridge
treet, directly opposite, and leading to the Monkwearmouth station, and
ligh Street right and left. At the corner on the right, is one of those

markable emporiums of ready-money trade, which have sprung up in

lost large towns—we refer to the tailoring establishment of Mr. Levy.



Turning round Mr. Levy's corner, we proceed along the High Street, which is occupied by some very first-class shops, banks, and places of business. An incessant stream of persons, belonging in some degree to the sea-faring class, may be seen promenading and enjoying the "day ashore." About half-way down on the left and centrally situated is



Donkin's Hotel, a house with a good commercial connection and capital accommodation.

Passing further down the steep hill we see the Exchange on the left, which was erected on ground granted for a term of years by Sir Henry Vane Tempest, Bart., who laid the foundation stone, August 10, 1812, and the premises were opened May 25, 1814. They include a large newsroom, in which are hung fine portraits of Sir H. V. Tempest, and the late Duke of Wellington; a spacious apartment appropriated to the sittings of the River Wear Commissioners, and public meetings convened

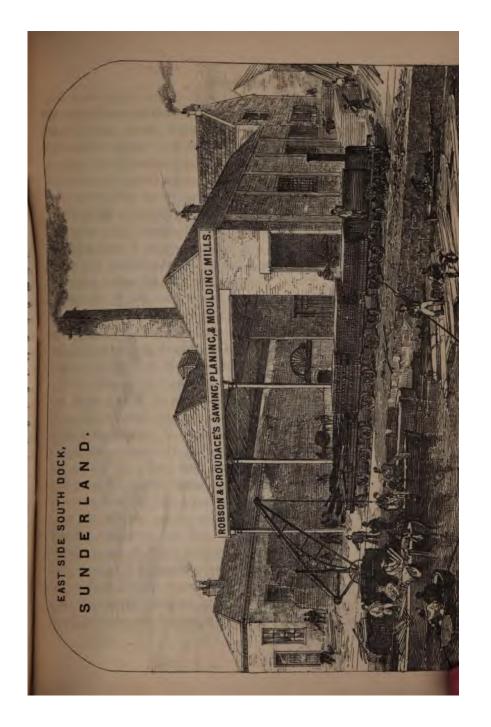
by the Mayor of the borough, &c. Merchants and brokers occupy the smaller rooms as offices, and a large covered area forms the "Rialto" of Beyond, the street narrows considerably, and after winding the town. through the lower part of the town, brings us to an undertaking which more than any other of modern times has contributed to the commercial prosperity of the port. On October 10, 1845, George Hudson, Esq., on behalf of the Newcastle and Darlington Railway, subscribed his name for £75,000 towards £225.000, the estimated sum required for the construction of the South Dock. The foundation stone was laid by Mr. Hudson in the presence of an immense concourse of spectators, February 4, 1848, and the southern section of the undertaking was formally opened June 20, The dock at that date was eighteen and a-half acres in extent, and estimated to contain 260 vessels, and the half-tide basin thirty-eight. Great rejoicings took place on the occasion. On the 24th November, the communication between the completed portion and a capacious extension took place; by this addition the dimensions of the docks were increased to thirty-two acres. In February, 1856, the southern half-tide basin, and the sea outlet were finished, together with a tidal harbour, which had been enclosed from the sea. This portion of the works was opened March 5, 1856, when four gun-boats, built on the Wear, proceeded to sea by the new outlet, the Mayor, A. J. Moore, Esq., steering the first vessel. The cost of the docks up to this date was about £640,000; and the area enclosed from the sea for the tidal harbour, quays, warehouses, &c., was 127 acres. An immense warehouse has been erected on the western side, where also are drops for the supply of coals to ships loading in the docks.

Crossing over the gates near the Dock Office, and Mariners' Chapel, and turning to the right, the visitor finds himself in the midst of a busy scene of industry. He will probably be attracted first of all by the immense piles of timber on both sides of the road, and on inquiry will find that these are the well known saw mills of Messrs. Robson and Croudace, who rank among the largest timber merchants in the north of England.

Here vessels of all sizes discharge their cargoes of wood from nearly every timber-exporting country under the sun, and here it lies in all shapes and sizes, from

> "the tallest pine Hewn on Norwegian hills, to be the mast Of some great ammiral."

to the common pit prop and the slender batten. Messrs. Robson and Croudace possess a capital water-frontage, and the produce they import is deposited at their very doors. A branch line from the North-Eastern Railway runs into the works, connecting them with the whole railway system of Great Britain, and by means of the Seaham and Sunderland Railway they are connected with the extensive works and collieries of the Marchioness of Londonderry, while by water conveyance they obtain easy access to the large and important collieries of the Earl of Durham, the Hetton Coal Company, the Wearmouth Colliery, and the ship-building works on the Wear, as well as with the Tyne and neighbouring ports. The firm does a very large trade in pit props; supplying many of the important collieries in the district with great quantities of these indis-The machinery in Messrs. Robson and Croudace's pensable articles. establishment (driven by a powerful double steam-engine), is of the most modern and improved construction. The frame saws cut logs up to thirty inches square, into boards and planks of any thickness, and deals up to thirty inches deep into thin boards; while the planing machine planes edges, grooves tongues, and "thicknesses," at one operation, boards and timber up to twelve by six inches thick—the moulding machine, which is the only one in Sunderland, cutting single and double architraves and mouldings of any size or pattern. If the visitor can gain admittance to the works he will be surprised and gratified to behold a plain piece of wood applied to the moulding machine, and emerge the next minute s finished moulding. It may be mentioned that this last named machine was constructed by the well known house of Powis, James and Co., of





was constructed by the well known house of Powis, James and Co., of the Victoria Works, Blackfriars Road, London, from patterns made especially for Messrs. Robson and Croudace, a duplicate machine being at the same time contributed to the International Exhibition of 1862. There are also on the premises numerous circular saws, of which we can only find room to say that one of them, worked by two men, can cut upwards of 5,000 pit props per day. The firm, as may be supposed, has an extensive connexion with colleries, builders, and others; and can supply almost anything from a carpenter's wedge to a ship's mast; from a Norway batten to a finished mahogany moulding, and from a pit prop to a colliery spear-rod, a shear-leg, or a main bunton.

The pier on the south side of the harbour runs an immense distance into the sea, and in fine weather is an agreeable and much frequented promenade. The old light-house at the eastern extremity was in 1856 replaced by an iron structure of loftier altitude, designed by Mr. Meik, engineer to the River Wear Commission.

The visitor may now return to the bottom of the hill in High Street, and turning along the narrow lane, which is in the corner at the right or north side, cross the ferry, and explore the workshops and buildings in Monkwearmouth. In doing this he will have an opportunity of seeing the immense amount of industry which finds its artery to remuneration by the river Wear. Here, huge anchors, splendid iron steamers or ships with "lines of beauty," spring into existence, under the hands of workmen remarkable for their general intelligence.

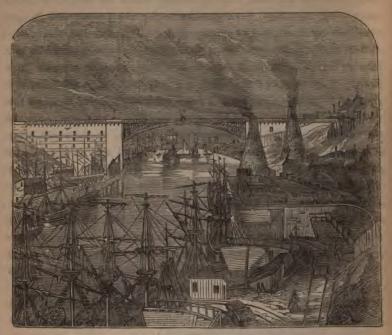
In this locality, near the eastern shore, lie the remarkable works of Messrs. Armstrong and Co., for the preservation of timber. Here, literally forests of timber are brought, passed through the saw-mills, and then charged with creosote or other preservative in such a manner as to free it from liability to ordinary decay. The plan has been tested for more than twenty years, and by this process the most common kind of fir wood is made more durable, in damp situations, than the hardest wood



MESSES, ARMSTRONG'S CREOSOTING WORKS,

would otherwise be. The wood effectually resists the attacks of marine insects, and has been found invaluable for the props used in coal mines, and for the timber in railway works. This firm has, moreover, a portable apparatus for preserving timber, invented and patented by Mr. John Armstrong, which will run either on railways or on common roads. The principal operations conducted at Sunderland, and at the Company's works at West Hartlepool are creosoting, kyanising, boucherising, and burnetising; the two first named processes being most in use. At each of their establishments the timber is brought close to the works, where there is a good wharf, and lines of rail are so placed that the wood can be run on waggons to any part of the premises and thence to the main lines of railway and the quay for shipment. The firm, by this means, has ready communication with all the local collieries, ship-building yards, &c., with neighbouring ports, and, by means of the railway, with inland places in every direction. As merchants, the Company does a very extensive business in sleepers, railway fencing, deals, battens, spars, props, &c.; in fact, in all kinds of timber used on railways, collieries, and public works which they supply either preserved or in the natural state.

The Wearmouth Bridge is a cast-iron structure, which, by a single arch, gracefully spans the river, and connects the parishes of Bishop-wearmouth and Monkwearmouth. This unique fabric was erected under the superintendence of the proprietor, Rowland Burdon, Esq., upwards of sixty years ago—the foundation stone having been laid September 24, 1793, and the bridge opened to the public August 9, 1796, subject to tolls for both carriages and foot passengers, which were afterwards abolished. After long consideration, owing to suspected insecurity and the acknowledged inadequacy of the bridge to accommodate the increasing traffic of the borough, it was resolved to alter and improve the fabric; and an Act of Parliament having been obtained in 1857, the Town Council adopted the plans of R. Stephenson, Esq., M.P., who proposed to retain the main features of the original design, while remedying the defects and removing



THE WEARMOUTH BRIDGE.

the objectionable features which had long been subjects of complaint. The contract for the projected works was let to Mr. B. Lawton for £34,697 10s. 4d., and was completed by the end of 1858. The bridge was widened 7 feet 2 inches, and the inclination of the approaches altered from one in seventeen to one in fifty. The structure was also restored from its serious deflection to the east, strengthened by additional girders and tubular work, ornamented with appropriate palisading, and made in every respect adequate for the exigencies of the locality.

Leaving the river we arrive by a steep ascent, on the northern foot of the bridge, and find ourselves opposite the best hostelry in Monkwearmouth,



RICHARDSON'S ROYAL HOTEL.

which is close to the station of the Newcastle and Sunderland branch of the North-Eastern Railway, by which we propose, on leaving Sunderland, to convey our readers back towards the main line. But a game at billiards, or a cigar at the "Royal" will prepare him to resume his walk, and there is much yet to see. Walking over the handsome iron bridge, we see on the right, the Catholic Chapel, and on the opposite side, the Post Office, and beyond he will find himself once again at "the four cross roads" at the end of Fawcett Street.

If not too much fatigued, he should turn to the right, (or west) along the upper part of High Street, and enquire for HARTLEY'S GLASS WORKS, which are the most extensive, we believe, in the world for the manufacture of the peculiar kind of glass known as "Hartley's." particularly worthy of a visit. The managers are exceedingly courteous, and we shall always remember our pleasant trip through the works. crystal warehouse, wherein are stowed the stock of manufactured glass, is an extraordinary erection, and was thus described in a local paper in December, 1852:--"Its entire length is 270 feet; its width 75 feet; and its height, below the transverse beams of wood composing the roof frame, 20 feet. The main beams which are eleven in number, 191 inches wide, and 15 inches deep, combine, in a singular degree, elegance, strength, and utility; as they are hollow, and so form main gutters. There are also seventy-two cross-beams, or gutters, each formed by the junction of three Norway battens, purchased the exact size, and having a combined width of 11½ inches, depth of 7 inches, and length of 21 feet. The general effect of these, as the engraving clearly suggests, is very light and striking. One of the main features, however, is the glass covering. It is glazed over its whole extent with Hartley's Patent Rough Plate, one-eighth of an inch thick, and weighing 2lbs. to the foot, the kind now almost universally used for conservatory and railway station roofs, and which was supplied by Mr. Hartley to Messrs. Fox, Henderson and Co. for the latter purpose, in the instance of the immense roof erected at the Great Western Railway Station at Paddington—the first building so roofed after the Crystal Palace in Hyde Park; the new baths at Buxton are also glazed with this same material. The size of the squares is 76 inches by 20. They amount to no less than 1560 in number (equal to 16,400 superficial feet), and yet to no more than fourteen tons in weight !-- an extraordinary lightness, if we contrast it with the glass roofing of the Great Northern Railway Station in London, in which the plates are half an inch thick, and consequently, enormously heavier. In equal areas, in fact, of roofing,



HARTLEY'S GLASS WORKS, SUNDERLAND.



e difference between the rough plate of Messrs. Hartley would be that etween fourteen tons and fitty-six! Messrs. Hartley successfully vindicted their legal claim to the originality of manufacturing this species of rolled plate glass for roofs, in a trial for infringement of patent before the Lord Chief Baron. A prize medal was adjudged to Mr. Hartley by a jury of the Great Exhibition, for specimens sent there of this peculiar manufacture. At one time, all the glass used for horticultural purposes was found to have the dangerous property of acting like a burning lens, and so withering and scorching up the plants beneath it. This was a disputed point, until an admitted authority, the Gardeners' Chronicle, set the final seal upon the affirmative in these plain words—"We are bound to declare that sheet glass does burn leaves, although in different degrees, according to its quality, some samples producing effects of very little practical importance. We believe that no glass has ever been made which is so well adapted for hot-house roofs as the 'patent rough plate,' manufactured by Mr. Hartley. This glass is prepared by rolling, which destroys transparency, without diminishing translucency. It is slightly rough on the surface, which has the important effect of dispersing the sun's rays, instead of concentrating them. It renders a shade superfluous in summer, and we do not imagine that it will intercept any material amount of light in winter." Mr. Hartley was the first to introduce this species of manufacture into England, and, whatever may be said for the claims of others, he was the undoubted originator and inventor of the "ridge and furrow roof without lap-joints," adopted in the construction of the Crystal Palace, and very generally, but erroneously, attributed to Sir Joseph Paxton. This is clearly stated in a letter, which we have seen, written by Mr. Hartley to M. D. Wyatt, Esq., the architect, and in which the writer further says, "I am aware that the credit of the original introduction of German sheet glass into this country had been given by Mr. Paxton—in his singularly inaccurate information—to Mr. Chance We were, at that time, partners; and on me devolved the whole practical

proceedings connected therewith. I have continued to manufacture up to the present time, and I could have glazed the whole of the Exhibition building with 30oz. glass, at an amount not exceeding £3,000 beyond the cost that will occur from the 16oz."

After passing through the warehouses, we were much amused at seeing the mode in which ground glass was produced by an imitation of one of nature's operations. The rough glass was in all kinds of beautiful patterns and in sheets of great size. An interesting part of the manufacture here carried on was that of railway elliptical lenses, and ship's signal glasses. Photographic glass is sent out by the ton, and many a portrait from home, pressed to the heart of an Australian wanderer, was manufactured at Hartley's works.

For green-houses, &c., the rough glass introduced by Mr. Hartley is beyond all comparison, the best in use.

Returning from this locality, we wend our way back towards Sunder-derland, and see upon our left an unused burying ground, which presents many attractions to an ornamental gardener. If the tourist take the path leading by the side of this he will come to the top of the brow overlooking the river, and will get a good view of the industrial occupations going on in the Wear, above the bridges. Ship-building, both in iron and wood, is here going on, and it is said that Sunderland turns out more vessels in number and tonnage than any other place in England. The path being followed, leads us into a narrow street which opens on the south end of the iron bridge. Turning to the left, over it, we are conducted to Monkwearmouth once more. Not far from the station is the Monkwearmouth colliery, the deepest coal mine in England, with one exception.

THE MONKWEARMOUTH AND SOUTH SHIELDS BRANCH.

Leaving the port of Wear by the North-Eastern line, we pass through a district wherein considerable attention is paid to agriculture. At Clea-

don, the first station, there are a branch establishment of Messrs. Robson and Croudace of Sunderland, a model farm, and the residence of a very learned goelogist—a clergyman of retired habits, whose residence is a museum of curiosities. Like Mr. Waterton, the living creatures around him are thoroughly confident of his friendship, and the fish in the pool, or the birds on the trees, are almost equally affectionate and familiar. When digging in the garden, the robins persist in following his spade so closely, that he is often in danger of injuring one of his little friends unintentionally. A few miles beyond, and north-west of Cleadon, is BROCKLEY WHINS JUNCTION where the line divides—one portion turning nearly due west to Gateshead, the other to

SOUTH SHIELDS.

To the last named port we shall turn; but for this purpose, if we have got into the proper carriage, we need not change. As the train passes forward the traveller should glance out on his left, or northwards, and he will obtain a view of Jarrow and the forest of shipping lying in the TYNE DOCK.

The station is not a very pleasing piece of architecture, and the approach to the town of Sonth Shields is anything but impressive, considering that it is a market town, a seaport, a municipal and parliamentary borough. For the ten years between 1851 and 1861 inclusive, the inhabited houses in South Shields Union increased from 4,659 to 5,961, whilst the inhabitants increased from 35,790 to 44,803. South Shields was an ancient Roman station, but owes its modern importance to the coal trade. In the market place is the Town Hall, used as an Exchange and News-room. In the modern part of the town are some good houses, but South Shields cannot boast of any very handsome streets. The working men have erected a very commodious hall for meetings, and there are places of worship for almost all sects. A great quantity of coal is brought down the river to be shipped here, and there are coal-pits in the immediate vicinity. Ship building is extensively carried on in the docks, and there are also

extensive glass works, potteries, alkali works, breweries, and rope walks. Near the town are some curious mounds known as the "Ballast Hills," composed of ballast brought back by vessels which have taken coals from the port, and returned without profitable freight. The pilots of South Shields are a fine body of men; the tower at the mouth of the river is called "The Pilot's Tower." The subscription library, the Mechanics' Institution, and other kindred institutions, are supported by all classes in the town, and if South Shields lacks beauty, it is by no means deficient in public spirit.

Whilst the visitor is at South Shields he should not fail to pay a visit to the wild and romantic beauties of Marsden Rocks which are about two miles distant.

Instead of returning to Newcastle by the line, which contains few matters of any interests, we shall now cross the Ferry to North Shields and Tynemouth. A slight and imperfect idea of the enormous traffic which is carried on by means of the Tyne will thus be formed.

NORTH SHIELDS.

North Shields, like its companion on the other side of the Tyne, is a market town; and, conjointly with what was once the village, but is now the town of Tynemouth, it is a parliamentary and municipal borough. It rose to importance under the protection of the Prior of Tynemouth, in the reign of the first Edward, but the jealousy of Newcastle somewhat checked its progress by obtaining an edict to destroy the buildings which the good old churchman had put up for the convenience of sea-faring men. The town now extends for more than a mile along the river side; it possesses some good buildings and a very handsome public institute; there are also a theatre, assembly rooms, good baths, and accommodation for persons of all religious persuasions. The commercial value of the place as a port is very great, as vessels of 300 tons burthen can load at the Quays; but it is in contemplation to create docks also, and then the trade of the Tyne ere long rival that of the Mersey.

The tourist may walk the short distance between North Shields and the adjoining township of Tynemout, where he will be able to find excellent hotel accommodation, and where there are sufficient objects of attraction to detain him for a few days. If the weather be favourable, the walk round by the shore side will repay the labour.

TYNEMOUTH,

described in most guide books, &c., as a "village," can be honoured with that modest title no more. It has grown into an active and lively watering place, with good streets, handsome houses, and first-rate hotels. The population in Tynemouth Union in 1851 was 89,297, in 1861 it had increased to 111,151. The lodgings at Tynemouth are good, and the accommodation at the hotels is excellent. First-class physicians can be consulted at Newcastle and the prescriptions made up at Mr. Bailey's, a highly respectable and reliable druggist in Front Street. We could enlarge, had we space, upon the beauty of the rocks beyond Cullercoats, and the advantages of the fine promenade along the new pier; but more complete information may be obtained in the handbook published by Messrs. M. and M. W. Lambert.

Leaving Tynemouth by the railway, we return to Newcastle-upon-Tyne, passing in our way Willington Quay on the left, or south. This place is memorable as the spot to which George Stephenson came as a "brakesman," and where he furnished a humble dwelling for his young bride Fanny Henderson.

The cottage in which he took up his abode was a small two-storied dwelling, standing a little back from the quay, with a bit of garden in front. The Stephenson family occupied the upper room in the west end of the cottage. Close behind rose the Ballast Hill.

It was at Willington that Robert Stephenson was born. Here to celebrate the event, has arisen "The Stephenson Institution," which confers

the blessings of a cheap education, in a locality in which the great engineerfelt the necessity of knowledge.

Arrived at Newcastle-upon-Tyne, which has already been noticed on the direct route, we resume our progress northwards, and complete our account of the North-Eastern Railway by describing the route from

NEWCASTLE-ON-TYNE TO BERWICK-ON-TWEED.

The line leaves the Central Station to the eastward and forming a curve by the old castle, is carried over viaducts across the roads and streets past the "Manor's Station," and presently afterwards crosses a deep valley, the Ouseburn, by a bridge of wood constructed on very ingenious principles. The first station of any interest or importance is

KILLINGWORTH,

A village rendered notable by its association with George Stephenson. It is otherwise an uninteresting locality, being wholly devoted to coalmining. This village lies about seven miles north of Newcastle, and is one of the best known collieries in that neighbourhood. The workings of the coal are of vast extent, and give employment to a large number of workpeople. The colliery stands high, and commands an extensive view of the adjacent country.

The story of Killingworth and Stephenson's celebrated experimental engine must be read in Mr. Smiles' work.

CRAMLINGTON

is the station for South Cramlington, and Seaton Burn. A little beyond, the line is carried by a viaduct over the river Blyth to East Choppington Horton, and Stanington. Beyond, after crossing a viaduct over the Wansbeck, we arrive at

MORPETH,

The station for Bothal Church and Castle, which is two miles distant, and is worth a visit. Mitford Castle too, is within a short walk.

Morpeth itself is an ancient place, and a parliamentary borough of conterable interest; its population in 1851 was 18,127 and in 1861 24,000. It is situate 15 miles north of Newcastle, and 320 from London. It is a two members to parliament. The town stands on a sort of peninder formed by the windings of the Wansbeck river, and it has two idges—one of them being designed by the great engineer Telford. The wish church is of the fourteenth century; St. James' is a modern edifice. The Grammar School is of Edward the Sixth's foundation, and was in Chancery for 150 years. Among the buildings are the Town Hall crected by Vanburgh, schools, Mechanics' Institute, and the County Jail and House of Correction. This last cost £70,000 about thirty-five years ago. Near the jail are the ruins of the castle, the gate tower of which has recently been repaired for the residence of the land steward of the Earl of Carlisle, the Lord of the Manor.

Flannel, leather, and hats are manufactured at Morpeth, and there are also breweries, iron-foundries, and corn-mills. Morrison, the Chinese scholar, was born here.

Beyond Morpeth we pass over the Line water to Widdrington, where the castle is an object of interest to antiquarians. It was formerly the seat of that hardy knight who fought upon his stumps at the battle of Chevy Chase, twenty miles distant. Acklington is near the pretty river Coquet, in which there is some good fishing. The stream runs down to Warkworth Castle, whose chief feature is the magnificent octagonal keep which the second Earl of Northumberland added to the Norman Castle of the Fitz-Richard family, and its walls and the vaulted chambers of its lower story are sill strong and massive, "Like veteran worn but unsubdued,"

it looks forth on land and sea as if still maintaining the pride of the ancient Percys. The interior presents a very characteristic and unexpected scene for the guard-rooms and other gloomy vaulted chambers on the entrance-floor, (beneath which are still more rayless dungeons)



WARKWORTH CASTLE.

remain perfect and in their former strength like shapely caverns of solid stone; and the walls of the once beautiful chapel of the dining halls, and the various chambers and domestic offices connected with it, which occupy the floor above the entrance, are still massive and entire, and, though now open to the sky and a resting-place of the sea-birds, afford an impressive example of the baronial state of other days. The imposing walls that surround the whole plateau of the fortified enclosure, are for the most part of Norman date.

But at Warkworth the castle is not the only interesting monument of the past, for, on the opposite side of the river, among the deep woods seen from the rampart, are the cells—excavated like a grotto in the sandstone cliff, and overhung by trees, to which the well-known ballad gives romantic associations—the work and former abode of the "Hermit of Warkworth:"—

"The chief, a chapel, neatly arched, On branching columns rose,"

a chantry, probably, that was founded by the third Earl of Percy, for Mary Plantagenet, his wife. The church is a Norman structure, built on foundations of the earlier church of Saxon days.

RELTON, on the river Aln, is the station for Lesbury, Alnmouth, Denwick, Shilbottle, and the ancient town of

ALNWICK.

Which may be said to be a colony around the magnificent seat of the Duke of Northumberland.

ALNWICK is situated thirty-four miles from Newcastle, and 316 from It is well laid out and the houses well-built. cipal entrances are by Bondgate, Narrow-gate, Pottergate, and Clay-The first of these, the gate erected by Hotspur, still stands. Town Hall is large and commodious; there is also a reading room. parish church is in the perpendicular style. The "Freemen's Well," a long pond, is noticeable from the custom requiring each freeman on being "made" to flounder through the water at the word of command of the bailiff of Alnwick. The principal architectural attraction, however, is Alnwick Castle, which was built by Eustace de Vesci, about 700 years ago. During the disastrous civil war, the castle was allowed to fall into decay, and it was not until the year 1414, when the family honours were restored to the Earl's grandson, that the castle was repaired. The present duke is now completing a magnificent design for the purpose of restoring to the exterior of his castle its mediæval dignity, and providing a new and sumptuous interior, which is being enriched with carvings and decorations designed from churches and palaces of Italy. These costly works are naturally attracting much attention to Alnwick, and the fitness of a

Renaissance style of ornament for the interior of a feudal castle in Northumberland, has been much debated; but at all events the architecture of former times really worthy of preservation has been carefully preserved, and Alnwick Castle is acquiring the splendour which the greatest historical edifice in the north of England should display.

Leaving Alnwick by the branch line, we return to Bilton Junction, an at a distance of about three miles arrive at Longhoughton, the static for Howick Castle, a house of the last century, the seat of Earl Grey. A Christon Bank the tourist may visit Dunstanburgh Castle, which belonged to the House of Lancaster, and was demolished after the defeat Hexham. Chathill is the station for Swinhoe and Ellingham, the seat of the Haggerstones. Newham is the station for Elford (two miles and Twizel House (two miles), the seat of Mr. Selby. Chillingham the seat of the Earl of Tankerville, and associated with the fame of a breed wild cattle, is seven miles off. Two miles beyond Newham is Lucke the station for Alderston, Chatton, the town of Wooler, and Dutcheste Here the traveller should turn aside, if he can spare the time, to vis Bamburgh Castle, one of the most beautiful and romantic spots in North Indiana, where the heroic Grace Darling is buried.

Heteraling to Lucker, we pursue our journey three miles further to

RELFORD.

od in 1851 was 6,871, and in 1861 6,260. The print of the people is agriculture. Near Humbleton Crossov routed Douglas.

in the ford is Braz, the station for Haggerston, Fenham in, and Lindisfarne.

at may be conveniently visited in the summer from Newcast

as pleasure trips frequently are arranged by steamer thither. Scremerston, the next station, is that for West Longridge, Unthank, and Norham Castle. Tweedmouth Junction is the next station, and then we are at the old border town of

BERWICK-UPON-TWEED,

Which is not within any county, and is sometimes said to be "neither in England nor Scotland but in both." It is a municipal and parliamentary borough, seaport, garrison town, and the seat of a Poor Law Union. The population in 1861 was 21,863.

Berwick returns two members to Parliament. The town extends for about three miles along the sea-cost, and comprises an area of nearly eight square miles—the residents being on an average about one to every two The first mark it makes in history is in the 12th century, when it was the capital of the Lothian district of Scotland. It then contained a magnificent castle, churches, hospitals, and monastic buildings. It was indeed considered so important that it was created one of the four "royal burghs of Scotland." In a subsequent period it was alternately possessed by the Scotch and English, till the reign of Alexander III. of Scotland. when it seems to have attained its climax of prosperity as a commercial and trading port. A colony of the Flemings were then carrying on a large trade in wool, hides, salmon and other commodities. During the competition of Baliol and Bruce for the Scottish throne, the English parliament sat at Berwick, and Edward I. gave judgment in favour of Baliol, in the hall of the castle. When Edward I. afterwards besieged and took the place, he gave the town a charter and certain privileges. In 1318 it fell into the hands of Bruce, and remained under the Scots Subsequently it was the alternate prize of the contending parties till 1482, when it surrendered to Edward IV., and remained an English possession.

Some of the ancient walls of the town still remain, and the Bell Tower, is almost entire. The more modern parts of the walls were built in thereign of Elizabeth. The existing defences consist of a mud rampart faced with stone, but the fortifications are more extensive than this brief description would indicate. There is a saluting battery of twenty-two guns, which commands the English side of the Tweed. The "gates" are five in number. The parish church dates from 1652. The Guild Hall, a handsome and convenient structure with a stately spire, and a peal of eight bells, was built in 1750-1760.

The bridge over the Tweed is 924 feet long, and consists of fifteen arches; it is inconveniently narrow on the Tweedmouth side. It was built in the reign of Charles I., and is the property of the Crown. The Tweed is navigable as high as this bridge, but the tide flows about seven miles further. The salmon fisheries of the Tweed are still very productive, and the fish are sent to London packed in ice.

The railway bridge over the Tweed is one of the largest and finest works of the kind in the country.

We have now concluded our very imperfect review of the districts and towns through which runs that great commercial artery of wealth

THE NORTH-EASTERN RAILWAY.

We have sought to compose a volume which shall possess a permanent history of a line more directly connected with the birth and progress of railway enterprise than any other, and which is yet destined to exercise incalculable advantages upon the North of England. We lay down our pen with regret. Associated with the lovely spots and the busy emporiums of trade through which the line passes are recollections of a sunny character,

and though there are clouds of regret which hang in the sky of memory, we may say with the accomplished Rogers:—

"Lulled in the countless chambers of the brain
Our thoughts are linked by many a hidden chain.
Awake but one, and lo! what myriads rise;
Each stamps its image as the other flies.
Each, as the various avenues of sense
Delight or sorrow to the soul dispense,
Brightens or fades; yet all with magic art
Controls the latent fibres of the heart,
As studious Prospero's mysterious spell
Drew every subject spirit to his cell;
Each at thy call advances or retires,
As judgment dictates, or the sense inspires."

Nevertheless, everyone in a busy life will have cause, if he be honest to himself, to share the sentiment of Themistocles, "I wish you would instruct me how to forget; for I remember what I do not desire, and cannot forget what I wish."

"And so," dear reader, and imaginary fellow-traveller, in the words of the poor player, "I affectionately bid you FAREWELL."

J. BAXTER LANGLEY.

热情

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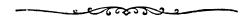


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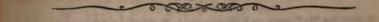
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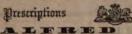
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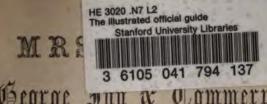
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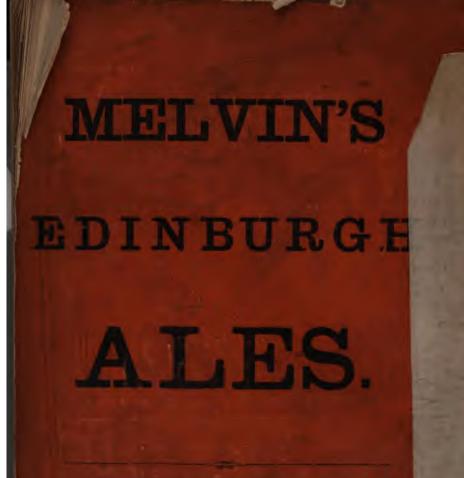
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